Canadian Food Inspection Agency
Agence canadienne d'inspection des aliments
Health Canada
Santé Canada

MAKING IT CLEAR

Renewing the Federal Regulations on Bottled Water: A Discussion Paper

Canadian Food Inspection Agency and Health Canada
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AN INVITATION

To ensure the continued safety and quality of bottled water and packaged ice products sold in Canada, the Government of Canada is preparing to improve and modernize the federal laws and policies that govern these products. The revised Regulations will draw on the latest scientific information and recent developments in standards-setting, both within Canada and abroad.

This initiative will reinforce consumers' confidence and support the growth of domestic and international markets for these products. It represents one element in a series of changes now taking place in the bottled water industry, including the development of a new international standard for bottled water under the Codex Alimentarius and the drafting of a code of practice for Canadian manufacturers of bottled water and packaged ice.

We want to hear from YOU!

When drafted, the new regulations will affect many Canadians, so it is fitting that you have the opportunity to express your views about how these laws should evolve. To this end, Health Canada, in cooperation with the Canadian Food Inspection Agency, is launching a public consultation as a first step in the process of regulatory renewal. The Government of Canada invites all interested Canadians to contribute their knowledge, concerns and opinions to help identify the issues that need to be addressed, and to determine how best to amend the federal laws concerning bottled water so that they continue to serve our needs in the 21st century.

This publication provides some of the background information you will need to know to understand the issues, explains some key concepts and terms, and sets out the Government's views about what changes are needed. It also asks readers to comment on proposed changes the Government is considering, or, where the Government is less certain of its direction, to choose among several possible options.

You can submit your comments on-line, by mail, fax or e-mail, or in a scheduled meeting with our representatives. Please see the Introduction for more information about this consultation and how you can participate.

A consultation on a related initiative is also being conducted by the Canadian Food Inspection System Implementation Group (CFISIG). Indeed, a "Code of Hygienic Practice for Commercial Prepackaged and Non-Prepackaged Water" (the Code) has been drafted by a working group of the CFISIG and is the subject of a concurrent consultation. Readers interested in the Code are invited to seek more information at http://www.cfis.agr.ca/english/cnsltdoc/cnsltdocs_e.htm Health Canada will take into account comments on the Code when developing proposed changes to the Food and Drug Regulations.

This is your chance to help shape the laws governing an important food product—bottled water. Please let us know your views.

ACKNOWLEDGEMENTS

This discussion document was prepared by the members of the *Interdepartmental Policy Team on Review of Regulations and Policies Governing the Sale of Prepackaged Water and Ice in Canada*. Sincere thanks go to Ms Luisa Crapigna, Mr. Kevin Gallagher, Mr. Paul Kirkby, Ms. Yin Lee, Mr. Steve Cloutier of the Canadian Food Inspection Agency, and to Ms. Joan Commerford, Ms. Judy Froome, and Ms. Claudette Dalpé of Health Canada. Health Canada and the Canadian Food Inspection Agency would like to acknowledge the expertise and input of Mr. Jaroslav Zenchuk of Aspen Creative, Ottawa, who edited the document.

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INTRODUCTION

How is Bottled Water Regulated in Canada?

In Canada, bottled water is considered a food product and is regulated under the federal Food and Drugs Act and Regulations. The Act provides the federal authority to make laws to ensure the safety and quality of food, and expresses the general principles to be observed. The Regulations set out the specific rules that must be followed to achieve the purposes of the Act. The part of the Regulations that deals explicitly with bottled water is Division 12, "Prepackaged Water and Ice."

The regulations the Government intends to update are principally those of Division 12 of the Food and Drug Regulations. However, this initiative also involves specific requirements that appear in Division 15 of the Regulations, namely the limits for arsenic and lead in bottled water. Also targeted for revision are certain federal policies concerning the labelling of bottled water, which are applied under both the Food and Drugs Act and the Consumer Packaging and Labelling Act.

Federal responsibility for the regulations dealing with bottled water and prepackaged ice products sold in Canada is shared by Health Canada and the Canadian Food Inspection Agency (CFIA). Health Canada establishes health and safety standards for bottled water and packaged ice and develops labelling policies related to health and nutrition. CFIA develops standards related to the packaging, labelling and advertising of these products and handles all inspection and enforcement duties.

Individual provinces and territories may also have laws, regulations, guidelines and policies that apply to bottled water. Whereas federal laws set the minimum standards for these products, provinces and territories are free to establish stricter standards in their own jurisdictions. In Quebec, for example, inspection and enforcement with respect to water and ice sold commercially in that province are carried out by the Ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec (MAPAQ).

In addition, companies that belong to industry associations must follow the codes of practice established by these organizations.

What Do the Laws Say?

Part I of the Food and Drugs Act (FDA) expresses several key principles that are designed to ensure the health and safety of all foods, including bottled water. Basically, the law prohibits the manufacture or sale of any article of food containing poisonous or harmful substances, or food that has been prepared, preserved, packaged or stored in unsanitary conditions (FDA, Sections 4 and 7). It also prohibits the importation or shipment between provinces of any food that does not meet prescribed standards

(FDA, Section 6). Section 5(1) of Part I of the FDA is a general prohibition against false or misleading labelling or advertising.

The Food and Drugs Act applies to all water, including water used in the manufacture of food and soft drinks, and water sold in bulk to consumers who bring their own container. (It does not apply to tap water, which is a provincial/territorial responsibility.) The regulations of Division 12, on the other hand, apply only to water and ice that have been packaged for sale in a sealed container. Division 12 defines the different classes of bottled water, the common names to be used for each class (common names are discussed in section 1.1 of this paper), the microbiological standards to be observed for bottled water and packaged ice, and specific labelling requirements for these products. You will find more detailed descriptions of current federal regulations and policies in the chapters that follow.

Applied to bottled water, these laws make everybody along the entire retail chain—from the point at which the water is collected to the point at which it is sold to consumers—individually responsible for ensuring the quality and safety of these products. For imported water, this responsibility falls on the person or company that brought the product into the country.

Tap Water

The safety and quality of tap water is a provincial/territorial or municipal responsibility.

For its part, the federal government produces the *Guidelines for Canadian Drinking Water Quality*. The *Guidelines* set Maximum Allowable Concentrations (MACs) for various microbiological, chemical and radiological substances found in water that are known to be, or thought to be, harmful to human health. MAC values are typically 10 to 5000 times lower than those at which adverse health effects are known to occur, to allow for exposure from other sources, a lifetime of exposure from water, and other factors. The *Guidelines* also define a number of desirable aesthetic attributes of drinking water—qualities that give it a pleasing appearance, taste and odour.

The *Guidelines* are developed by a special federal/provincial/territorial committee led by Health Canada and kept up-to-date by a panel of scientists and water experts. The Canadian Food Inspection Agency enforces the *Guidelines* in areas under federal jurisdiction (Crown lands, military bases, Indian reserves etc.) and can act to protect public health where there is evidence that the *Guidelines* are not being met.

The Government of Canada makes the *Guidelines* available to provincial/territorial governments who, in turn, can set up their own water quality standards, monitoring, testing and enforcement programs for drinking water based on the *Guidelines*. Most provincial/territorial governments have done so.

The full texts of the Food and Drugs Act and the current Regulations are available online at the Health Canada website at http://www.hc-sc.gc.ca/food-aliment/friia-raaii/food_drugs-aliments_drogues/act-loi/e_index.html and at the CFIA website at http://www.inspection.gc.ca/english/reg/rege.shtml.

Why Do the Laws Have to Be Updated?

Here are just a few of the reasons why change is needed:

- **To incorporate new scientific knowledge.** Most of the Regulations in Division 12 date back to 1973 (some minor changes were made in the 1980s). Since then, we've learned a lot about the impact of chemicals and biological contaminants on human health. The Government wants to update the Regulations to take into account the latest scientific information. Changes would include the adoption of new sampling and testing methodologies, and the addition of standards

for *Pseudomonas aeruginosa* (a disease-causing organism) and bromate (a by-product of ozone use).

- **To harmonize our regulations with those of other governments/organizations.** The Government wants to harmonize Canadian standards for bottled water with those used by Quebec and the U.S. It also seeks to reconcile them with international standards recently established by the Codex Alimentarius Commission[1] and the World Health Organization Guidelines for Drinking Water. Harmonizing our regulations with the rules used by other countries is important to Canada's international trade.

- **To bring the Regulations in line with the *Guidelines for Canadian Drinking Water Quality*.** Apart from setting limits on arsenic and lead, the current Regulations do not contain specific, detailed parameters for chemical and radiological contaminants in bottled water and packaged ice, so the Government uses the *Guidelines for Canadian Drinking Water Quality* as a benchmark to assess the safety of bottled water. But nothing in the Regulations obliges manufacturers to observe the *Guidelines* during the production of bottled water and packaged ice. The Government wants to bring the Regulations in line with the *Guidelines*. When referenced in the Regulations, the *Guidelines* will, in effect, become law for bottled water.

- **To make the Regulations clearer and more precise.** Many people are not aware that Division 12 of the Food and Drug Regulations applies only to "prepackaged water and ice," meaning water and ice products that have been packaged for sale in sealed containers. One of the first changes the Government wishes to make to the Regulations is to clarify this point. Other measures would clarify rules and policies that are established under both the Food and Drugs Act and the Consumer Packaging and Labelling Act and administered by the Canadian Food Inspection Agency.

- **To improve consumer protection and reduce confusion.** The Government is considering stricter limits on some microbiological and chemical contaminants. Other proposed changes will give consumers more useful information on which to base buying decision (for example, by making the declaration of Total Dissolved Solids[2] more meaningful and applying it to all types of bottled water), and reduce

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[1] The Codex Alimentarius Commission (CAC) is the Food Standards Programme of the joint Food and Agriculture Organization and the World Health Organization. It establishes food safety and quality standards to protect the health of consumers and to facilitate fair practices in food trade. CAC standards are voluntary guidelines that member nations can use to develop their own regulations.

[2] Total Dissolved Solids are discussed in section 5.2.

buyers' confusion (by limiting the variety of common names that can be used to describe bottled water products, for example).

- **To accommodate new products.** Many new products have appeared in recent years, some of which were not anticipated when Regulations were written. The Government intends to introduce a new classification scheme that would recognize these new products and allow them to be regulated for the benefit of consumers.

How Will the Consultation Work?

Phase 1 of this initiative involves drafting a discussion paper (ie., this document) outlining what needs to be changed and why, and inviting public comment on proposed changes. In Phase 2, readers' submissions will be used to develop a firm set of regulatory proposals, which will be published in the *Canada Gazette*, Part I, early in 2003. At that time, Canadians will have a second opportunity to comment on the proposals before they are finalized and promulgated in the Regulations.

During Phase 1, Health Canada and the Canadian Food Inspection Agency will work to increase public awareness of the issues and to encourage public participation in the review process. At this stage, the Government is asking all interested Canadians—producers, importers, distributors, industry associations, provincial and territorial governments, special interest groups, health professionals, academics and consumers—to contribute their insights and ideas as to how the Regulations for bottled water should be changed. The Government will also invite responses from representatives of Canada's major trading partners.

Contributors can help identify issues that need to be addressed and the specific regulations and policies that need to be updated, improved or clarified. The Government is particularly interested in learning what information consumers need to see on the labels of bottled water in order to make informed buying decisions.

Readers can submit their comments in several ways:

- By mail to:

  Claudette F. Dalpé
  Associate Director, Food Regulatory Program
  Bureau of Food Regulatory, International and Interagency Affairs
  Food Directorate, Health Products and Food Branch
  Health Canada
  Tunney's Pasture, Building No. 7, Room 2351 (0702C1)
  Ottawa ON K1A 0L2

- By e-mail to: bottled_eau@hc-sc.gc.ca

- By fax to: (613) 941-3537
- Online, by visiting our website at: http://www.hc-sc.gc.ca/food-aliment/friia-raaii/frp-pra/water-eau/e_rfr_bottle_water.html
- In person, by requesting a meeting with one of our representatives. Please call (613) 957-0360.

Responses and comments can be submitted until November 30, 2002.

About This Document

This publication is meant to guide and focus contributors' comments.

The document is divided into chapters and numbered sections, so that readers can go directly to the areas that interest them most. Of particular interest to consumers will be Chapters 1 and 2, which deal with the Government's proposed new classification scheme, and Chapters 5 and 6, which deal with labelling. Chapters 3 and 4, which deal with proposed microbiological, chemical and radiological standards for bottled water, are addressed to producers and other specialists in the field. Nevertheless, consumers are invited to look into the proposals and provide comments if they wish to do so.

Each chapter and section covers a different topic in the Regulations. Each section begins by describing the situation as it exists under the current legislation. It then outlines the proposed changes the Government is considering or, where no proposal yet exists, some of the options for change.

Following this, where appropriate, is a section entitled "What Are the Implications of This Approach? What Are the Benefits?" Here we sketch out how the proposed change, if implemented, might work, and some of the effects it might have on producers, consumers, regulators and legislators. Our comments in this section should not be interpreted as a definitive statement of all the pros and cons associated with any given proposal—because we don't know them all, nor could we. We're simply listing some of the more obvious and foreseeable impacts to help readers understand the issues and to stimulate their thinking. We fully expect—and hope—that readers will bring to our attention many other potential consequences, benefits and risks associated with the proposed changes that we haven't thought of.

At the end of each section are questions the Government would like readers to address. The questions ask readers to comment on the proposed changes, choose among the available options, or provide options of their own. **Readers are asked to quote the question number when submitting their comments.** Please note that in keeping with our commitments to an open and transparent process, comments made to Health Canada in response to this document will not be considered confidential. However, the names of the individuals sending comments that have identified

themselves and who are not representatives of groups/organizations will be protected pursuant to the *Access to Information Act*.

At the end of the document you will find a useful glossary of terms and additional references to documents related to the subject.

Conventions Used in This Document

The Food and Drugs Act and Regulations use the term "prepackaged water and ice," meaning water and ice products that have been packaged for sale in sealed containers. For simplicity, we will use the term "bottled water" throughout this paper to mean the same thing. We will use the word "standard" when referring to an established or proposed criterion or specification, and "parameter" when referring to a standard having an acceptable range of values.

The following typographical conventions are also used:

- small caps for the names of product categories (eg., WATER REPRESENTED BY ITS ORIGIN, PREPARED WATER), common names (eg., SPRING WATER, MINERAL WATER), and words having a special meaning when used in connection with bottled water and packaged ice products (NATURAL, PURE, PURIFIED, etc.);
- upper and lower case letters with initial capital letters for trade names, brand names and trademarks (eg., Aberfoyle Springs, Naya, etc.);
- boldface type for emphasis.

Where Can I Get More Information?

Readers can learn more about bottled water and this initiative by visiting the Health Canada website at http://www.hc-sc.gc.ca and following the links to http://www.hc-sc.gc.ca/food-aliment/friia-raaii/frp-pra/water-eau/_e_rfr_bottle_water.html. To obtain a printed copy of this document, please call (613) 957-0360 or write to:

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Could you please indicate to us if you belong to one or more of the following categories of stakeholders:

□ MP/Senator□ consumer □ consumer association/advocacy group
□ industry/industry association□ federal govt/agency □ P/T govt/agency
□ municipal government □ association of municipalities □ research/academia
□ health professional □ subject expert/consultant

1. Water Represented by Its Origin

This chapter deals with the classification of bottled water products whose water is taken from a specific water resource, and the criteria such products must meet to qualify for inclusion in these categories.

Canada's Food and Drug Regulations place spring and mineral water in a category of their own and set out the criteria that such products must meet before they can bear these names. Under the current Regulations, any bottled water labelled SPRING WATER or MINERAL WATER must:

- originate from an underground source which is not part of a community water supply; and
- be naturally fit to drink (potable) at the source; and
- before bottling, not be treated in any way that changes the original chemical composition of the water. (The allowable treatments are discussed in section 1.2.)

Products that do not meet the criteria for SPRING/MINERAL WATER are regulated separately, as WATER OTHER THAN MINERAL WATER OR SPRING WATER. The water for these products can come from many different sources, or combination of sources, and can be treated in whatever ways are needed to make it potable. These products are discussed in Chapter 2.

For regulatory purpose, then, all bottled water sold in Canada falls into one of two categories: it is either (a) SPRING/MINERAL WATER, or (b) WATER OTHER THAN MINERAL WATER OR SPRING WATER.

Only products that meet the criteria for SPRING WATER and MINERAL WATER can use these terms on their labels. These products are discussed in detail in sections 1.3 and 1.4.

In recent years new bottled water products have appeared on store shelves, some of which also claim to originate from specific sources. Glacier and iceberg water are two examples of such products.

The Government must decide how these new products should be regulated. Should these products have their own categories, together with their own definitions, approved names and qualifying criteria? Or can existing categories be expanded and redefined to accommodate these products?

1.1 CLASSIFICATION

Our Proposal

The Government proposes to expand and redefine the existing category that now includes only SPRING WATER and MINERAL WATER. The new category would be called WATER REPRESENTED BY ITS ORIGIN. To qualify as WATER REPRESENTED BY ITS ORIGIN, the water used for these products would have to:

(a) be obtained from a single environmental water resource having a specific geographical location, but not obtained from a public or private water distribution system;

(b) at all times, at the collection point(s), meet the microbiological parameters set out in sections 3.1;

(c) receive no treatments or additions other than those listed in section 1.2;

(d) throughout the bottling process, retain the composition and characteristics of the water at the collection point(s), with the exception of changes resulting from the permitted treatments specified in section 1.2; and

(e) at all times after bottling, meet the microbiological, chemical and radiological parameters specified in sections 3.1 and 4.2.

Any bottled water product that met the above criteria could qualify as WATER REPRESENTED BY ITS ORIGIN. The category would include water from underground springs that met the criteria, as before; but it could also include water from artesian wells and other underground sources, as well as water from rivers, lakes, glaciers, icebergs and various other above-ground sources. The terms under which water drawn from an above-ground water resource might qualify as WATER REPRESENTED BY ITS ORIGIN are considered in section 1.5.

Water that did not qualify as WATER REPRESENTED BY ITS ORIGIN would fall in the second category called PREPARED WATER. These products are discussed in Chapter 2.

What Are the Implications of This Approach? What Are the Benefits?

Note that WATER REPRESENTED BY ITS ORIGIN must:

- come from a specific natural water source and only from that specific source; it cannot contain a mixture of water from different sources;
- **always** be fit to drink at the source;
- at all times and at every stage of the bottling process—from the time the water is collected to the time the final product is bottled, capped and shipped—be identical in quality and composition to the water at the source.

It would be the responsibility of the bottler (that is, the manufacturer) to make sure these conditions are met. Bottlers would have to protect their water source from contamination by pollutants and infiltration by other water sources. They would have to monitor and test the source water to make sure it was always potable. They would

have to collect, transport, process and bottle the water, and distribute the final product, in ways that maintained its original quality and composition. And they would have to keep adequate records to demonstrate that, at all times, the water at the source and in the final product meets the established criteria.

For bottlers, the reward for this effort would be the right to call their products by special names that would be set aside for the exclusive use of these products. Like the terms SPRING WATER and MINERAL WATER, these designated common names would refer to the water resource from which the water came. Only products that qualify as WATER REPRESENTED BY ITS ORIGIN could use these names.

What Is a Product's "Common Name"?

The common name of a bottled water product is the name specified in the Regulations for that type of product; or, if none is specified, it is the name by which that type of product is commonly known to consumers.

Imagine, for example, the label of a bottle of XYZ Springs water. The words "XYZ Springs" might appear in large, colourful type at the top of the label, while the words "Spring Water," in smaller, plain type, might appear at the bottom. In this example, "XYZ Springs" would be the commercial or brand name of the product, and "Spring Water" would be the common name.

Only qualifying products can use the common names designated in the Regulations for that category of product.

Note that the designated common name need not be the same as the name of the product category. Terms such as WATER REPRESENTED BY ITS ORIGIN, PREPARED WATER, and SURFACE WATER, are names given to product categories for regulatory purposes only. Except in the case of SPRING WATER and MINERAL WATER, they are not the common names that would appear on the product's label. Throughout this publication, the names of product categories and common names are printed in small caps, like this: WATER REPRESENTED BY ITS ORIGIN, SPRING WATER, etc.

Under the Government's proposal, the designated common names of WATER REPRESENTED BY ITS ORIGIN would always relate to the water resource where the water is collected (for example, SPRING WATER, GLACIER WATER, etc.). Those for PREPARED WATER might relate to the characteristics of the final product (eg., DEMINERALIZED WATER), the treatment(s) used to prepare the final product (eg., DISTILLED WATER) or the product's intended use (eg., DRINKING WATER), but they could not relate to the source of the water.]

The designated common name, printed on the product's label, would immediately identify a product as belonging to a unique category of bottled water products—products whose water originates from a protected water resource, is always fit to drink at the source, and whose original chemical composition is not altered in any significant way. Consumers would look to the product's designated common name for assurance that they are getting what they expect.

Under the current Regulations, the designated common names for products that meet the criteria for SPRING/MINERAL WATER are SPRING WATER and MINERAL WATER. The question of what common names should be allowed for WATER REPRESENTED BY ITS ORIGIN under the proposed scheme is considered in sections 1.3, 1.4 and 1.5. The question of whether use of these terms should be mandatory is discussed in section 5.1. Section 5.9 discusses how the geographical location of the source should be identified on the label.

The wording of the proposed regulation is consistent with the wording used in the section on "Waters Defined by Origin" in the *Codex General Standard for*

Bottled/Packaged Drinking Waters (Other Than Natural Mineral Waters).[3] (In this text, we will refer to this publication as the Codex Standard.)

Questions

Q1. Do you think it's a good idea to create a new category called WATER REPRESENTED BY ITS ORIGIN? Please explain your position.

Q2. If you think it is a good idea, are the criteria listed in paragraphs (a), (b), (c), (d) and (e) above adequate and complete? What changes, if any, would you make to the list?

1.2 Permitted Treatments and Modifications

The general rule for SPRING WATER and MINERAL WATER is that they cannot be treated in any way that alters their original chemical composition or other essential characteristics. The rule exists to assure consumers that the water in a bottle labelled SPRING WATER or MINERAL WATER is fundamentally identical to the water in the underground source where it originated.

But the rule does permit the addition of some substances that are specified in the Regulations. Under the current Regulations, SPRING/MINERAL WATER may be:

- carbonated (to make the water bubbly);
- disinfected with ozone (to prevent the growth of bacteria during the bottling process); and
- fluoridated (to help prevent tooth decay).

Although these treatments do change the character of the water, their benefits are considered to be important enough to justify the exceptions.

With the creation of the new category called WATER REPRESENTED BY ITS ORIGIN, the Government proposes to keep the principle of allowing no fundamental changes to the original water, but to express the rule in a different way. The new rule would list acceptable treatments and modifications for this category.

Our Proposal

The Government proposes to amend the Food and Drug Regulations to permit only the following treatments and modifications for WATER REPRESENTED BY ITS ORIGIN:

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[3] Codex Stan 227-2001 *General Standard for Bottled/Packaged Drinking Waters (Other Than Natural Mineral Waters)*. Adopted by the Codex Alimentarius Commission (CAC) at its 24th Session (Geneva, July 2-7, 2001).
ftp://ftp.fao.org/codex/standard/en/CXS_227e.pdf

(a) the removal of undissolved solids;
(b) the removal or reduction of dissolved gases;
(c) the removal of unstable compounds such as iron, manganese and sulfur;
(d) the precipitation or removal of minerals originally dissolved in the source water in an amount greater than what remains soluble when the water is exposed to normal atmospheric conditions above ground at the collection point;
(e) a change in pH resulting from a change in the concentration of dissolved carbon dioxide;
(f) disinfection by pasteurization, ultraviolet irradiation or microfiltration;
(g) disinfection by ozone;
(h) the addition of carbon dioxide;
(i) the addition of fluoride, provided that the total amount of fluoride in the final product (naturally occurring fluoride plus added fluoride) does not exceed 1.0 mg/L (milligrams per litre); and
(j) in the case of established water sources and their related products, the removal of a naturally occurring mineral whose concentration in the source water exceeds the revised limit set for it in the *Guidelines for Canadian Drinking Water Quality*.

What Are "Normal Atmospheric Conditions"?

"Normal atmospheric conditions" means the condition of the atmosphere above ground at the collection point at the time of collection. The term takes into account such measures as temperature, atmospheric pressure and the chemical composition of the air.

Water that is below ground exists under certain conditions of temperature and pressure. When it is brought to the surface, the water is exposed to different conditions: the pressure drops and the temperature rises, among other things. These changes can result in changes in the water. For example, as the pressure drops the water can release certain dissolved gases, such as carbon dioxide. Its pH level also changes, which can cause some formerly dissolved elements to precipitate (settle to the bottom of the container).

Such changes are normal and acceptable, and would not disqualify the product from the category WATER REPRESENTED BY ITS ORIGIN. Changes beyond these would result in the product being classified and regulated as PREPARED WATER.

These treatments and modifications would be allowed because they do not significantly change the water from its original state, or because they add desirable qualities to it. In most cases, the changes are those that would occur anyway when the water is exposed to **normal atmospheric conditions** (see the accompanying sidebar). In all cases, the treatments would result in water that is safe to drink.

The permitted treatments and modifications listed above are in line with those in the new Codex standard for "Waters Defined by Origin." (They are not identical, as the Government's proposed list is more detailed.)

What Are the Implications of This Approach? What Are the Benefits?

Water treated or modified only in the above ways would still qualify as WATER REPRESENTED BY ITS ORIGIN. Water that received any other treatments or modifications would be classified as PREPARED WATER.

Under this proposal, the above list of allowable treatments would apply to **any** water qualifying as a WATER REPRESENTED BY ITS ORIGIN, not just to SPRING WATER and MINERAL

WATER.

Questions

Q3. Should the Regulations be revised to list all permitted treatments for WATER REPRESENTED BY ITS ORIGIN? Or should there be just a general prohibition against treatments that significantly alter the original water? Please explain your answer.

Q4. If you think a list like the one above is a good idea, is our proposed list accurate and complete enough? Should any items be removed or added? Should any items be reworded? Please explain your answer.

Q5. Notice that some items in our list do not specify how the permitted outcome should be achieved. Item (a), for example, allows the removal of undissolved solids, but does not say whether this should be done by filtration, centrifugation, aeration, green sand catalysis, or another method. Assuming that the list is a good idea, should the Government also specify what methods should be used to achieve the desired results? Why or why not?

1.3 Mineral Water

In the current Regulations, the definitions of SPRING WATER and MINERAL WATER are identical (see the introductory paragraphs to Chapter 1). Because the Regulations draw no other distinction between these products, the two terms can be used interchangeably.

Minerals in Water

Minerals are naturally occurring homogeneous solids with a definite chemical composition and a distinctive internal crystal structure. Most minerals are inorganic, but a few are organic. Minerals combine with each other to form earth and rocks. As water moves through soil and over rock, it dissolves very small amounts of minerals and holds them in solution in the form of ions (positively and negatively charged atoms).

The most common minerals in water are bicarbonate (HCO_3), calcium (Ca), chloride (Cl), magnesium (Mg), potassium (K), silica (SiO_2), sodium (Na), and sulfate (SO_4). Dissolved calcium and magnesium are largely responsible for the "hardness" of water.

Yet surveys show that consumers expect mineral water to be different. They expect it to contain a significant quantity of minerals—certainly more than SPRING WATER and tap water. But the Regulations aren't helpful here either. Although they require that the total dissolved mineral salt content be indicated on the label of a bottle of MINERAL WATER, they do not say what **minimum concentration** of mineral salts (also referred to as Total Dissolved Solids, or TDS) a product must contain to qualify as MINERAL WATER. The result is confusion on the part of consumers.

The Government believes it is time to differentiate the two products and establish a standard for the TDS content of MINERAL WATER. It proposes to do this by setting a threshold value: products with a higher TDS content than the threshold would be called MINERAL WATER; those with a lower TDS content would be called SPRING WATER.

Our Proposal

The Government proposes that MINERAL WATER be defined in the Food and Drug Regulations as WATER REPRESENTED BY ITS ORIGIN that comes from an underground source and has a TDS content of **at least** 500 mg/L.[4] This is the minimum amount of TDS that must be in the water when it is in its underground reservoir. There would be no maximum allowable concentration of TDS.

Why 500 mg/L? Because the Government believes that people who buy MINERAL WATER expect it to taste different, and studies have shown that most people[5] detect a change in the taste of water when its TDS concentration reaches 500 mg/L.

What Are the Implications of This Approach? What Are the Benefits?

Under this proposal a bottled water product would have to meet all the criteria for WATER REPRESENTED BY ITS ORIGIN (as set out in sections 1.1 and 1.2) **and** contain at least 500 mg/L of TDS before it could legitimately be called MINERAL WATER.

The 500 mg/L TDS threshold would allow consumers to buy with confidence. People who expect a significant amount of dissolved minerals when buying MINERAL WATER would get it; and people who dislike the taste of water with a high mineral content would know exactly which products to avoid. The result would be greater clarity and increased consumer satisfaction.

The proposed threshold coincides with the figure adopted by the Canadian Bottled Water Association to distinguish between SPRING WATER and MINERAL WATER. But it is considerably higher than the figure of 250 mg/L used by the U.S. Food and Drug Administration.[6] The US-based International Bottled Water Association also uses the 250 mg/L figure.

The question of whether total TDS would still have to be indicated on the label of a bottle of MINERAL WATER is considered in section 5.4.

Questions

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[4] See section 5.3 for an explanation of the terminology and units of measure used on the labels of bottled water.

[5] Most people in North American, that is. Other cultures have different taste sensitivities and might well choose a different TDS threshold.

[6] The American figure is based on the average mineral content of North American aquifers. Studies conducted in the U.S. show that few underground water sources in North America have a TDS value above 250-300 mg/L; most have less.

Q6. Should the Regulations include criteria to distinguish MINERAL WATER from SPRING WATER? Why/why not?

Q7. In your opinion, is 500 mg/L a suitable minimum TDS value for MINERAL WATER? Please explain your answer.

1.4 Spring Water

As mentioned in the previous section, the current Regulations define SPRING WATER and MINERAL WATER alike (see the introductory paragraphs to Chapter 1) and consider them to be pretty much the same thing. The terms are used interchangeably. Although the Regulations require that the TDS content of SPRING WATER be indicated on the product's label, they do not specify what **maximum concentration** of dissolved mineral salts a product is allowed to contain and still qualify as SPRING WATER. The result, again, is buyer confusion.

The Government believes it is time to differentiate the two products and establish a standard for the TDS content of SPRING WATER. This is easily done by adopting the same threshold TDS figure used for MINERAL WATER. Products with a higher TDS content than the threshold would be called MINERAL WATER; those with a lower TDS content would be called SPRING WATER.

Our Proposal

The Government proposes that SPRING WATER be defined in the Food and Drug Regulations as WATER REPRESENTED BY ITS ORIGIN that comes from an underground source and has a TDS content of **less than** 500 mg/L.

What Are the Implications of This Approach? What Are the Benefits?

This change will allow consumers to knowingly purchase the product of their choice, leading to increased customer satisfaction. Of course, water designated as SPRING WATER would also have to meet all the criteria for WATER REPRESENTED BY ITS ORIGIN.

Questions

Q8. In your opinion, is 500 mg/L a suitable maximum TDS value for SPRING WATER? Please explain your answer.

Q9. Instead of setting a fixed threshold limit on the TDS value of SPRING WATER, the Government could allow an acceptable maximum range of TDS values, say, 400-600 mg/L. For products whose TDS value falls within that range, manufacturers could choose whether to call them SPRING WATER or MINERAL WATER. Once selected, however, a product's common name could not be changed. In your opinion, would this be a better approach? Please explain your

answer.

Q10. Do you have any other comments on sections 1.3 and 1.4?

1.5 Surface Water

New products are appearing on store shelves claiming to be glacier water or iceberg water. Under the current Regulations, such products are classified and regulated as WATER OTHER THAN MINERAL WATER OR SPRING WATER. But some manufacturers argue that these new products can be as safe to drink at the source as SPRING/MINERAL WATER and that they should be included in the same category.

The Government must decide how such products should be regulated. At this point the Government has no proposal to put forward and is seeking the opinion of interested parties and the public on how best to proceed.

Basically, there appear to be two choices.

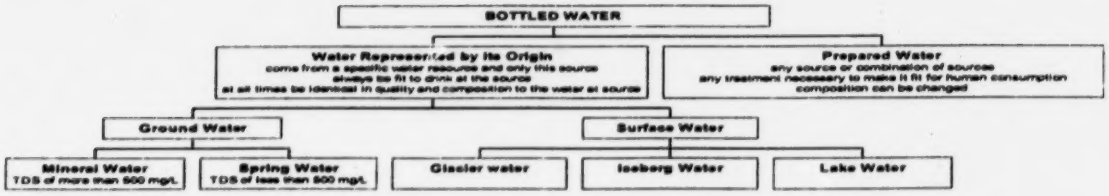
Option A: Create a new category called SURFACE WATER as a subcategory of WATER REPRESENTED BY ITS ORIGIN.

Under this option, the Government would create a new category called SURFACE WATER as a subcategory of WATER REPRESENTED BY ITS ORIGIN, and develop suitable regulatory definitions of each type of qualifying surface water. Products that qualified for inclusion in this category would be treated as WATER REPRESENTED BY ITS ORIGIN. SURFACE WATER could include any bottled water derived from an above-ground water resource, including water from rivers, lakes, streams, reservoirs, and icebergs.

It must be stressed, however, that not all products made from surface water would automatically be included in the category SURFACE WATER. Only products whose source water met all the criteria for WATER REPRESENTED BY ITS ORIGIN would qualify for inclusion. In other words, qualifying products would have to meet all the criteria of sections 1.1 and 1.2 for WATER REPRESENTED BY ITS ORIGIN, as well as the microbiological parameters of section 3.1 and the chemical/radiological parameters of section 4.2. Any bottled water product whose source water did not meet these criteria would be classified as a PREPARED WATER.

Figure 1 illustrates how this scheme might look.

Figure 1. The Proposed Categories of Bottled Water


BOTTLED WATER
Water Represented by its Origin
come from a specific water resource and only this source
always be fit to drink at the source
at all times be identical in quality and composition to the water at source
Prepared Water
any source or combination of sources
any treatment necessary to make it fit for human consumption
composition can be changed
Ground Water
Surface Water
Mineral Water
TDS of more than 500 mg/L
Spring Water
TDS of less than 500 mg/L
Glacier water
Iceberg Water
Lake Water

Qualifying products would be able to use a set of designated common names that referred to the water's origin (that is, a unique environmental water resource such as a glacier or lake). These names would be reserved for the exclusive use of these products.

What Are the Implications of This Approach? What Are the Benefits?

To regulate SURFACE WATER as a subcategory of WATER REPRESENTED BY ITS ORIGIN, the Government would have to develop suitable definitions of all the different types of surface water, definitions everyone could agree on. In theory, this could be done; in practice, it would be difficult because little is known about water from such sources—iceberg and glacier water, in particular.

Consider glacier water, for example. Here's how the Canadian Bottled Water Association defines glacier water in its Model Bottled Water Code:

> *Sample definition #1* (paraphrased from the original): Glacier water is water obtained from glacial melt water, which, at the collection point, has the same consistent composition of major minerals and characteristics as the glacial stream[7] at the point it emerges from the glacier.

And here's the definition used by the Province of Quebec in its proposed revisions to its regulations on water:

> *Sample definition #2* (paraphrased from the original): Glacier water [is] water produced by the melting of ice taken from a glacier, or which comes from a collection point located close to the source of the glacial stream, such that it is fed entirely and only by the melting of ice from the glacier.

Both definitions appear serviceable. Notice that both also specify where the water from a glacier should be collected. Choosing the collection point can be critical because, by definition, WATER REPRESENTED BY ITS ORIGIN must be free of influence from other water

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[7] The glacial stream is the water that emerges directly from the glacier as it melts, usually along the leading edge of the glacier.

sources and, when bottled, have the same chemical composition as its source. It is unlikely that meltwater collected at any distance from a glacier could meet these requirements.

This option is attractive because it would bring clarity to the issue. Consumers would be reassured that they are indeed buying glacier water (or iceberg water, or lake water, as the case may be), and bottlers would know exactly what criteria they needed to meet to qualify their products as WATER REPRESENTED BY ITS ORIGIN.

Option B: Do not include SURFACE WATER in the category WATER REPRESENTED BY ITS ORIGIN.

Under Option B, products made from any surface water would be classified as PREPARED WATER (PREPARED WATER is discussed in Chapter 2.) As PREPARED WATER, surface waters, when bottled, would have to meet the chemical, microbiological and radiological parameters of sections 3.1 and 4.1.

This option would be attractive if surface waters are not always safe at the source. Criteria for a source claim separate from the common name is set out in Section 5.9. Definitions similar to those set out in Option A could be developed under Option B.

Questions

Q11. Which of the above definitions of glacier water do you prefer? Why? If you don't care for either definition, can you suggest a better one?

Q12. Do you think qualifying surface water should be included in the category WATER REPRESENTED BY ITS ORIGIN? Please explain your answer.

Q13. If you think qualifying surface water should not be included in the category WATER REPRESENTED BY ITS ORIGIN, how should it be classified?

Q14. If you think that glacier water should be defined in the Regulations, should other types of surface water—such as iceberg water, lake water and river water—also be defined? If so, what definitions would you propose?

Q15. If glacier water is treated as PREPARED WATER, should bottlers be able to use statements like "Derived from a glacier" or "Influenced by a glacier" on the product's label, but separate from the product's common name? What should be the criteria for permitting such statements?

Q16. Should the Government consider other options for regulating SURFACE WATER?

2. Prepared Water

This chapter deals with the classification of water that does not meet the criteria for WATER REPRESENTED BY ITS ORIGIN.

Under the current Regulations, any bottled water sold in Canada that does not qualify as SPRING WATER or MINERAL WATER is automatically classified as WATER OTHER THAN MINERAL WATER OR SPRING WATER. Water in this category can come from any source or combination of sources, including a municipal water system. Unlike SPRING WATER and MINERAL WATER, it need not be potable at the source, and can be treated in any way that makes it fit to drink.

As discussed in Chapter 1, the Government may expand the category that currently includes just SPRING WATER and MINERAL WATER into a new category called WATER REPRESENTED BY ITS ORIGIN. This category would include qualifying SPRING WATER and MINERAL WATER, plus any surface water that meets the criteria spelled out in sections 1.1 and 1.2. (See Figure 1 in section 1.5.)

But what of water that does not meet this criteria? The Government believes that these products should be classified separately so that they are not mistaken for WATER REPRESENTED BY ITS ORIGIN. Making a clear distinction between these two product categories is in the interest of consumers and industry alike.

Our Proposal

The Government proposes that any bottled water products that do not qualify as WATER REPRESENTED BY ITS ORIGIN be classified as PREPARED WATER. In effect, the category PREPARED WATER would replace the former category WATER OTHER THAN MINERAL WATER OR SPRING WATER.

Bottled water classified as PREPARED WATER could come from any source or combination of sources, including springs, wells, reservoirs, icebergs, glaciers, rivers and lakes. It could even come directly from a municipal water system. PREPARED WATER could be treated in any way necessary to make it fit for human consumption, and minerals could be added or removed.

What Are the Implications of This Approach? What Are the Benefits?

This proposal does not represent a significant change from the current arrangement. It simply gives the Government a convenient way to regulate a variety of products using a single category and definition. The impacts of the proposed change on industry, consumers and regulators would be minimal.

The differences between WATER REPRESENTED BY ITS ORIGIN and PREPARED WATER should be carefully noted. Whereas WATER REPRESENTED BY ITS ORIGIN must come from

a single environmental water resource having a specific geographical location, and must be potable at the source, PREPARED WATER can come from any water source, or combination of sources, none of which need be potable to start with. It can even be plain tap water. And whereas WATER REPRESENTED BY ITS ORIGIN can be treated only in the ways outlined in section 1.2, PREPARED WATER can be treated in any way at all that renders it fit to drink. Such treatments can change the physical and chemical characteristics of the water to the extent that it no longer resembles the water it came from.

What are Food Additives?

A food additive is any substance that, when added to food, can become part of the food or alter its characteristics. A gelling agent and preservative are food additives. In the case of bottled water, which is also a food, carbon dioxide (CO_2) and ozone are considered additives. Both these substances transform the water in some way: CO_2 makes it effervescent, and ozone kills the microorganisms in it. Additives do not include mineral nutrients (which are added to enhance the nutritional value of food), vitamins, spices, seasonings, flavourings, agricultural chemicals, and substances added to the packaging material.

Food additives are defined in the Food and Drug Regulations, Part B, Division 1, and are listed in Part B, Division 16. If a substance is not on the list, it's not an approved food additive. All food additives are carefully assessed for their safety before being approved for use. The Regulations specify such things as how much additive can be used, in which foods, and under what conditions.

A complete list of approved food additives is available online at:
http://www.hc-sc.gc.ca/food-aliment/friia-raaii/food_drugs-aliments_droques/act-loi/e_index.html

To ensure public health and safety, any bottled water products and packaged ice made from PREPARED WATER would have to meet strict microbiological, chemical and radiological standards. These are set out in Chapters 3 and 4. PREPARED WATER would also have to comply with any existing rules governing the addition of food additives, as set out in Part B, Division 16 of the Food and Drug Regulations.

Chapters 5 and 6 deal with a variety of issues related to the labelling of PREPARED WATER and WATER REPRESENTED BY ITS ORIGIN. Of particular interest to consumers might be the discussions dealing with the common names that could be applied to products made from PREPARED WATER (section 5.2), the indication of the product's mineral content (sections 5.4 and 5.5), the identification of water that comes from a municipal water system (section 5.10), and the listing of treatments used in processing the water (section 5.12).

Questions

Q17. Do you think all bottled water products that do not qualify as WATER REPRESENTED BY ITS ORIGIN should be grouped together in a single category? Please explain your answer.

Q18. Do you agree that such products should collectively be called PREPARED WATER? If not, can you suggest a better term?

Q19. The current federal standards classify bottled water products that are coloured and flavoured as unstandardized beverages and not as bottled water. The Quebec government has established acceptable limits for colour and turbidity (cloudiness) parameters beyond which products can no longer fit within the

category of bottled water products. These parameters are an increase of not more that 8 units of true colour or 10 units in nephelometric turbidity compared to the levels measured in the original water (that is before addition of colour or flavour). Should the revised regulations for bottled water be extended to include flavoured waters with specific upper limits in the units? Please explain your answer.

3. Proposed Microbiological Standards for Bottled Water and Packaged Ice

Chapters 3 and 4 deal with proposed new microbiological/chemical/radiological standards for all bottled water.

Under the current Regulations, bottled water and packaged ice products must meet the following standards:

1. MINERAL WATER and SPRING WATER shall not contain **any** coliform bacteria, as determined by Official Method MFO-9, *Microbiological Examination of Mineral Water*, November 30, 1981.

2. Waters in sealed containers, other than MINERAL WATER or SPRING WATER,[1] shall not contain:

   (1) any coliform bacteria, as determined by Official Method MFO-15, *Microbiological Examination of Water in Sealed Containers (Excluding Mineral and Spring Water) and of Prepackaged Ice*, November 30, 1981.

   (2) more than 100 total aerobic bacteria per millilitre, as determined by Official Method MFO-15, *Microbiological Examination of Water in Sealed Containers (Excluding Mineral and Spring Water) and of Prepackaged Ice*, November 30, 1981.

3. Water used for packaged ice products shall not contain any coliform bacteria, as determined by Official Method MFO-15, *Microbiological Examination of Water in Sealed Containers (Excluding Mineral and Spring Water) and of Prepackaged Ice*, November 30, 1981.

One other microbiological standard is currently applied to bottled water although it is not explicitly stated in the Regulations. This standard is:

4. Bottled water products (including SPRING WATER and MINERAL WATER) cannot contain any *Pseudomonas aeruginosa*.[2]

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[1] This exception does not mean that SPRING/MINERAL WATER **can** contain coliform or aerobic bacteria. By definition, SPRING/MINERAL WATER must be free of coliform and aerobic bacteria at the source and remain that way until bottled.

[2] *Pseudomonas aeruginosa* is bacteria that can be a major concern when found in "raw" ingested foods such as bottled water. It has been the causative agent of gastrointestinal illnesses. It has been found in some bottled water products from many countries, including Canada. It may be present in the source water due to

Standard #4 above is currently a Health Canada guideline but is not in the Regulations.[3] By including it in the Regulations the Government would not be adding a new standard, as this requirement has been in a Health Canada guideline for many years. The Government now proposes to enter this standard into the revised Regulations (see section 3.1 (c) below).

Although these standards have served Canadians well since 1973, it is time they were updated to take into account new scientific knowledge and improvements in analytical methods. Most of the standards proposed below are identical to current Health Canada standards and guidelines.

Our Proposal

The Government proposes that the microbiological standards for bottled water be expressed in terms of either a 2-class or 3-class plan, depending on the degree of hazard involved. These plans define the standards specified in the Official Analytical Methods prescribed in the Regulations. The following definitions would apply in the revised Regulations:

- **n** is the number of sample units to be analysed;
- **c** is the acceptance number and is the maximum allowable number of marginally acceptable sample units;
- **m** is a numerical value representing acceptable concentrations of microorganisms;
- **M** is a numerical value representing an unacceptable concentration of microorganisms.

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contamination by surface run-off and domestic and agriculture effluents. The presence of *P. aeruginosa* in the final bottled water product may also be an indication of contamination during the bottling process.

[3] Health Canada writes standards and guidelines dealing with the safe manufacturing, processing, storage, transportation and handling of food. Health Canada makes the standards and guidelines available to regulators and the food industry as a guide to achieving compliance with Sections 4, 5 and 7 of the Food and Drugs Act. Health Canada's standards are defined in the Regulations, whereas its guidelines are not. The reason for this is that the guidelines are often based on fewer data than are the standards, and deal with matters or science that are still evolving. Because they are not part of the Regulations, the guidelines are more easily modified as new data become available.

Readers should not confuse Health Canada's guidelines for bottled water and packaged ice with the *Guidelines for Canadian Drinking Water Quality*. Health Canada guidelines for microbiological contaminants in food are available online at: http://www.hc-sc.gc.ca/food-aliment/mh-dm/mhe-dme/compendium/volume_1/e_index.html

3.1 Microbiological Standards for Bottled Water

No person shall sell bottled water if:

a) within 24 hours[4] of packaging, the water contains more than 100 total aerobic bacteria per millilitre, as determined by Official Method MFO-17, where
n = 5
c = 2
m = 100 per ml
M = 10,000 per ml;

b) it contains any coliform bacteria, as determined by Official Method MFO-18, where
n = 5
c = 1
m = 0 per 100 ml
M = 10 per 100 ml;

c) it contains *Pseudomonas aeruginosa*, as determined by Official Method MFO-19, where
n = 5
c = 0
m = 0 per 100 ml.

This standard would replace regulations B.12.001 (b) and B.12.004 (a) & (b). The current Regulations specify standards for coliform bacteria for SPRING/MINERAL WATER and WATER OTHER THAN MINERAL WATER OR SPRING WATER separately. The proposed revision would combine the two standards, apply them to all bottled water, and add the standard for *P. aeruginosa*.

3.2 Microbiological Standards for Packaged Ice

3.2.1 Microbiological Standards for Water Used to Manufacture Packaged Ice

No person shall manufacture ice for sale if the water from which it is made contains:

a) more than 100 total aerobic bacteria per millilitre, as determined by Official Method MFO-17, where
n = 5

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[4] The 24-hour limit is implicit in the current Regulations and would be made explicit in the revised Regulations. These bacteria are introduced during bottling; after 24 hours their concentration in the bottled water is too low to be measured. Compliance with this standard indicates the use of good manufacturing practices during bottling.

c = 2
m = 100 per ml
M = 10,000 per ml;

b) any coliform bacteria, as determined by Official Method MFO-18, where
n = 5
c = 1
m = 0 per 100 ml
M = 10 per 100 ml.

Note that there is no standard for *P. aeruginosa*. The reason is that *P. aeruginosa* does not survive in ice.

3.2.2 Microbiological Standards for Packaged Ice

No person sell packaged ice if it contains:

1) more than 100 total aerobic bacteria per millilitre, as determined by Official Method MFO-17, where
n = 5
c = 2
m = 100 per ml
M = 10,000 per ml;

2) any coliform bacteria, as determined by Official Method MFO-18, where
n = 5
c = 1
m = 0 per ml
M = 10 per ml.

3.3 Methodology

The Official Methods identified above would be used to determine compliance with the microbiological requirements for WATER REPRESENTED BY ITS ORIGIN and PREPARED WATER. The Methods would be referenced in the revised Regulations as follows:

"Official Method MFO-17" means the Official Method set out in *Microbiological Examination of Water in Sealed Containers and Prepackaged Ice for Total Aerobic Bacteria*.

"Official Method MFO-18" means the Official Method set out in *Microbiological Examination of Water in Sealed Containers and Prepackaged Ice for Coliform Bacteria*.

"Official Method MFO-19" means the Official Method set out in *Enumeration of Pseudomonas aeruginosa in Water in Sealed Containers by the Hydrophobic Grid-*

Membrane Filter (HGMF) Technique.

These Methods would replace Official Methods FMO-9 and FMO-15 referenced in the current Regulations.

The Compendium of Analytical Methods is available online at:
http://www.hc-sc.gc.ca/food-aliment/mh-dm/mhe-dme/compendium/e_index.html

Questions

Q20. In your opinion, are the proposed standards for levels of microbiological contaminants sufficient and complete enough to ensure the safety of bottled water and packaged ice? Please explain your answer.

Q21. In your opinion, should these standards be written into the revised Regulations, or should they remain as Health Canada guidelines?

4. Proposed Chemical and Radiological Standards for Bottled Water and Packaged Ice

The current Regulations do not explicitly set chemical or radiological standards for bottled water and packaged ice (except in the case of arsenic and lead). However, the Government of Canada uses its authority under Part I, Section 4 of the Food and Drugs Act to take action when such products present a health hazard to consumers. Part I, Section 4 of the Act prohibits the sale of any article of food containing poisonous or harmful substances. The Government assesses the chemical and radiological safety of these products based on the Maximum Acceptable Concentrations (MAC) specified in the *Guidelines for Canadian Drinking Water Quality*.

The Government proposes to improve this situation by explicitly referencing the *Guidelines for Canadian Drinking Water Quality* in the Food and Drug Regulations, with respect to PREPARED WATER and packaged ice; and by actually writing specific standards that would apply to WATER REPRESENTED BY ITS ORIGIN into the Regulations.

4.1 Chemical and Radiological Standards for PREPARED WATER and Packaged Ice

Our Proposal

The Government proposes to write into the Food and Drug Regulations the requirement that PREPARED WATER and packaged ice must meet the maximum acceptable concentrations and the interim maximum acceptable concentrations for chemical and radiological substances as specified in the most current *Guidelines for Canadian Drinking Water Quality*.[5]

What Are the Implications of This Approach? What Are the Benefits?

In theory, this proposal represents a significant change. Writing this requirement into the Regulations would have this effect: the standards for chemical and radiological substances set out in the *Guidelines for Canadian Drinking Water Quality* would become law, as far as PREPARED WATER and packaged ice are concerned.

In practice, the proposal would have few additional impacts on consumers, bottlers or regulators. It would simply make explicit what is currently implicit. The chemical and radiological standards that apply to PREPARED WATER and packaged ice would be clear from the Regulations themselves. And the Government would be able to enforce these

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[5] *The Guidelines for Canadian Drinking Water Quality* set "interim maximum acceptable concentrations (IMAC)" in cases where the scientific evidence remains incomplete, or where analytical methods are still being developed. With time and improved data, these standards will become MAC.

standards with respect to PREPARED WATER and packaged ice without having to reference Part I, Section 4 of the Food and Drugs Act.

4.2 Chemical and Radiological Standards for WATER REPRESENTED BY ITS ORIGIN

4.2.1 Chemical Standards for WATER REPRESENTED BY ITS ORIGIN

Since any water that qualifies as WATER REPRESENTED BY ITS ORIGIN must be potable at the source, and must be protected at the source from outside influences, it follows that such water must meet the standards for the man-made chemical contaminants in the *Guidelines for Canadian Drinking Water Quality* at the source.

As this is the case, there is no need to write all of the *Guidelines for Canadian Drinking Water Quality* into the Regulations. The Regulations need specify standards only for those chemical and radiological substances that might occur **naturally** in WATER REPRESENTED BY ITS ORIGIN at levels that could pose a health risk to consumers.

The current Regulations already recognize that arsenic and lead can occur naturally in water that meets the criteria for MINERAL/SPRING WATER. Standards for these substances are listed in Division 15 of the Regulations (Division 15 deals with the adulteration of food). The Government is proposing to move these standards into Division 12, which applies specifically to "Prepackaged Water and Ice," and to make them applicable to all bottled water products that qualify as WATER REPRESENTED BY ITS ORIGIN.

Our Proposal

The Government proposes to write the standards listed below into the Food and Drug Regulations. Where applicable, the proposed standards are identical to those in the *Guidelines for Canadian Drinking Water Quality*.

Table 1: Proposed Chemical Standards for WATER REPRESENTED BY ITS ORIGIN

	Column I	Column II
Standard	Substance	Maximum Limit (mg/L)
1	Arsenic	0.025
2	Barium	1.0
3	Benzene	0.005
4	Boron	5.0
5	Bromate	0.01
6	Cadmium	0.005
7	Chromium	0.05
8	Cyanide	0.2 (as CN)
9	Dichloromethane	0.05
10	Lead	0.01
11	Mercury	0.001
12	Nitrate	45.0 (10.0 as N)
13	Nitrite	3.2 (1.0 as N)
14	Selenium	0.01
15	Uranium	0.02

What Are the Implications of This Approach? What Are the Benefits?

Note that under this proposal, all the *Guidelines for Canadian Drinking Water Quality* would apply to PREPARED WATER and packaged ice, as discussed in section 4.1. But for bottled water products that qualify as WATER REPRESENTED BY ITS ORIGIN, only the standards listed in Table 1 would apply.

4.2.2 Radiological Standard for WATER REPRESENTED BY ITS ORIGIN

Our Proposal

In the revised Regulations, for WATER REPRESENTED BY ITS ORIGIN, the Government proposes to set the maximum acceptable concentration of the radionuclide radium-226 at 0.6 Bq/L.[6]

Questions

Q22. Under this proposal, for the reasons outlined above, the revised Regulations would contain one set of chemical and radiological standards for WATER REPRESENTED BY ITS ORIGIN, and another for PREPARED WATER and packaged ice. Do you agree with this approach? Please explain your answer.

Q23. In your opinion, are the standards listed here for chemical and radiological contaminants comprehensive enough to ensure the safety of bottled water and packaged ice? Should any of the proposed standards be changed? Should any others be added to the Regulations?

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[6] Radium-226 is the only radionuclide found naturally in water, and it occurs only in underground water, not in surface water. Because this standard is in the *Guidelines for Canadian Drinking Water Quality*, it would also apply to PREPARED WATER.

5. Regulatory Issues Related to Labelling

The next two chapters deal with issues related to the labelling of bottled water and packaged ice products. Chapter 5 covers issues that are dealt with in the Regulations. Decisions resulting from the Government's consultations and deliberations on matters discussed in this chapter will ultimately be reflected in the Regulations.

Food labels provide basic information about the product: its common name, ingredients, how much is in the package, its nutritional value, and so on. Labels also reveal who made the product and may include a picture, a slogan and other kinds of promotional material. Consumers look to product labels for information on which to base their buying decisions.

The Food and Drug Regulations include general labelling requirements for all prepackaged foods, as well as specific labelling requirements for bottled water and packaged ice. Yet a recent poll conducted by Health Canada suggests that many consumers find the labels on bottled water confusing and not particularly helpful as an aid to decision making. The Government would like to take the opportunity afforded by its proposed revisions to the Food and Drugs Regulations to improve the labels of bottled water and packaged ice. The questions in this chapter and the next will help regulators to better understand what information Canadians want and expect to find on the labels of these products. Your responses will help guide the Government in revising and updating the relevant regulations.

Throughout Chapters 5 and 6 you will encounter the term "principal display panel." The Food and Drug Regulations describe the meaning of "principal display panel". Simply put, the "principal display panel" is the part of a food label that is visible to shoppers when the product is displayed for sale in its customary way.

The principal display panel is where certain mandatory information about a food product must be shown. In the case of bottled water products, the mandatory information that is required to be shown on the principal display panel under the current Regulations is as follows:

- for **all** bottled water: the product's common name, net quantity and fluoride content;
- for MINERAL WATER and SPRING WATER: the geographical location of the source, the product's total TDS content, and, if either ozone or fluoride are added, a statement to this effect; and
- for WATER OTHER THAN MINERAL WATER OR SPRING WATER, a list of all the significant treatments that have been used.

These requirements are discussed in detail in the sections that follow.

5.1 What Common Names Should Be Used for WATER REPRESENTED BY ITS

ORIGIN?

As discussed earlier (see section 1.1), a product's common name is the name specified for that product in the Regulations; or, where none is specified, it is the name by which the product is generally known to consumers.

So, under the current Regulations, the designated common names for SPRING WATER and MINERAL WATER are, not surprisingly, SPRING WATER and MINERAL WATER. The names are simple and practical, and only products that qualify as SPRING WATER or MINERAL WATER according to the criteria set out in the Regulations can use them.

But they don't have to use them. No other bottled water products can use these common names, but those that can, don't have to. They can use these designated common names or they can use any other terms that are accurate and do not create a false impression in the minds of consumers about what is in the bottle or where it comes from. So a MINERAL WATER might also be called BOTTLED WATER, NATURE'S WATER, TABLE WATER and so on. All kinds of common names are possible. Which can lead to confusion among buyers.

As discussed in Chapter 1, the Government is proposing to adopt a new scheme whereby all bottled water products sold in Canada would belong to one of two categories: WATER REPRESENTED BY ITS ORIGIN or PREPARED WATER. Concurrently, the Government would like to settle the question of what common names can be used for products in these two categories. The Government is considering the following options for regulating the common names of WATER REPRESENTED BY ITS ORIGIN, and is looking for your recommendations.

Option A: Establish mandatory common names

Under this option, products that qualify as WATER REPRESENTED BY ITS ORIGIN would have to use the common names set out in sections 1.3 and 1.4 and no others. If surface water is ultimately included in this category (see section 1.5), the rule would also apply to products containing water from above-ground sources that meet the criteria for WATER REPRESENTED BY ITS ORIGIN (suitable common names would have to be developed for these products).

What Are the Implications of This Approach? What Are the Benefits?

For any given product type, such as water from springs or glaciers, bottlers would be restricted to the single common name specified in the Regulations for that product. There would be no options and no substitutions. The designated names would identify the water's source (SPRING WATER, GLACIER WATER, etc..

This approach would create a level playing field for all products in this category. Buyers would be faced with a limited number of names and would base their buying decisions

not on the product's common name, which would be the same for all products of a given type, but on the water's source, mineral content, and other factors.

Option B: Use designated common names but make their use optional

Under Option B specific common names would be reserved for the exclusive use of qualifying products in this category, but their use would be optional. Qualifying products could also be named using any other appropriate terms, including terms normally used for PREPARED WATER. This is essentially the situation that exists today.

Questions

Q24. Do you prefer Option A or Option B? Why?

Q25. If neither option appeals to you, can you suggest an alternative?

5.2 What Common Names Should Be Used for PREPARED WATER?

For products that do not qualify as SPRING WATER or MINERAL WATER, the current Regulations stipulate that the common names shall be:

- DISTILLED WATER, when the water has been vaporized and condensed;
- DEMINERALIZED WATER, when the water's mineral content has been reduced, by means other than distillation, to less than 10 mg per litre; and
- CARBONATED WATER, when carbon dioxide has been added to the water in any amount.

That's all the Regulations have to say about the common names of WATER OTHER THAN MINERAL WATER OR SPRING WATER. And the use of these names in these instances is not optional.

But what of other cases? What if the water needed other treatments besides demineralization, or other additives besides carbon dioxide to make it potable? What names should apply to it then?

On this question the Regulations are silent.[1] Since no other common names are indicated in these situations, any name which is accurate and not misleading may be used (provided the name doesn't refer to the alleged source of the water, a privilege reserved for the common names of SPRING WATER and MINERAL WATER only).

So bottlers have come up with a variety of names for their non-SPRING/MINERAL WATER

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[1] The current Regulations do require that any treatments applied to the water be listed on the product's label (see section 5.12). But this is a different matter, separate from the question of what common name should be used for the product.

products. Some of these names include terms that refer to various technical treatments applied to the water, or to the results of these treatments—terms that are unfamiliar to most consumers. Imagine trying to decide between a product named PROCESSED DEIONIZED WATER and another calling itself REVERSE OSMOSIS TABLE WATER. When multiple treatments and additives have been used, the resulting names can become even more confusing.

Our Proposal

In answer to the question "What common names should be applied to PREPARED WATER?" the Government is considering the following options, and is seeking your advice.

Option A: Base the common name on the total dissolved solids (TDS) content

Under this option, there would be only three possible names for PREPARED WATER, and all three would be based on the water's TDS content. (Recall that TDS measures the concentration of total dissolved solids in the water, including mineral salts.) So,

- DEMINERALIZED WATER would be the common name for any PREPARED WATER with a TDS content of 10 mg/L or less;
- DRINKING WATER would be the common name for any PREPARED WATER with a TDS content of between 10 and 499 mg/L; and
- MINERALIZED WATER would be the common name of any PREPARED WATER with a TDS content of 500 mg/L or more.

Note that these are suggested names. Other names may be developed as a result of this consultation.

What Are the Implications of This Approach? What Are the Benefits?

Under Option A, bottlers of PREPARED WATER would have to use one of these three names, and only these three. Nor could bottlers add any qualifying adjectives to the common name—terms referring to the treatments the water has undergone, or the results of those treatments, or the names of substances added to it. Bottlers could still name the treatments used, but they would have to do so in a separate statement elsewhere on the label: they could not work this information into the common name. (This issue is discussed in section 5.12.)

In special cases, certain qualifying adjectives could be allowed, such as CARBONATED (see section 5.11).

What's good about this option is that it keeps things clear and simple. All bottled water products made from PREPARED WATER would be described with just three names, all of which refer to the same thing: the water's TDS content.

But would this information be enough? For example, would people who prefer bottled water with a lower TDS content find it confusing that all products with a TDS count between 10 mg/L and 499 mg/L (the range signified by the name DRINKING WATER) have the same common name?

And there might be other problems with this option as well. For example, most people understand the terms MINERALIZED and DEMINERALIZED to mean that minerals have been added to, or removed from, the water. But suppose that a certain PREPARED WATER had a TDS count of 1000 mg/L to begin with, and was then treated during processing to reduce the concentration of minerals to 800 mg/L. Under Option A, the product's common name would be MINERALIZED WATER—a name suggesting that minerals had been added when, in fact, they had been removed.

Option B: Specify one or more common names, not based on the TDS content

Under Option B, bottlers of PREPARED WATER would have to select the common name of their product from a short list of approved names specified in the Regulations, but the names would not be tied to the TDS content of the water. The list of options would be kept small—two or three at most. Candidates for the list include TREATED WATER, BOTTLED WATER, PROCESSED WATER, DRINKING WATER, PREPARED WATER, TABLE WATER and WATER. Other suitable names could be identified by these consultations.

Under this option other words could be added to the designated common name to describe the treatments used to produce the water—words such as DISTILLED, DEMINERALIZED and CARBONATED. The use of such terms would be optional.

What Are the Implications of This Approach? What Are the Benefits?

By limiting the choices for the common name of a PREPARED WATER, Option B would keep matters simple and should reduce buyers' confusion. By allowing bottlers to add terms to the common name that describe the treatments used or the results of those treatments, Option B would provide some flexibility, allowing bottlers to tailor the names of their products to target specific markets, or to distinguish their products from those of competitors. These terms would also give consumers additional information they could use to make buying decisions.

On the negative side, the proposed terms are not very descriptive of the treatments used and do little to distinguish one type of PREPARED WATER from another. And because the use of additional terms would be optional, Option B would not necessarily provide consumers with more information about the treatments the water has undergone, or their results, than Option A. As well, products that undergo multiple treatments would be permitted to assume names that are unwieldy and confusing, cancelling any gains. Names like MINERALIZED CARBONATED DRINKING WATER would be possible.

Option B resembles the American approach. In the U.S., the common name for any

bottled water (excluding MINERAL WATER and SPRING WATER) that meets established criteria is either BOTTLED WATER or DRINKING WATER. References to treatments or the state of the water after treatment are optional, but, if used, can be added to the product's common name under specified conditions.

Option C: Set no designated common names

Under Option C, bottlers could use any reasonable common name that is accurate and does not mislead consumers (but not names that refer to the water's source).

What Are the Implications of This Approach? What Are the Benefits?

If Option C were combined with the requirement that bottlers reveal, in a separate statement on the product's label, the treatments that have been used to produce the water, the current situation would continue unchanged. Option C doesn't require bottlers to make any major changes and allows them the most leeway in choosing common names for their products. On the other hand, consumers are not well served by Option C because it does nothing to resolve the confusion that results when a variety of names are used for similar products.

Questions

Q26. Which of these three options do you prefer? Please explain your answer.

Q27. If you prefer Option A, are the proposed names and their corresponding TDS values appropriate? What changes, if any, would you recommend?

Q28. If you prefer Option B, which common names should be allowed for PREPARED WATER?

Q29. If you prefer Option C, please explain why.

Q30. If you don't like any of the options, can you suggest an alternative?

5.3 Units and Measures

The current Regulations require that bottlers of SPRING WATER and MINERAL WATER declare the actual quantity of total dissolved mineral salts in the water, in parts per million (ppm), in a statement on the principal display panel of the product label. Products other than MINERAL WATER or SPRING WATER are exempt from this requirement (see section 5.4).

TDS vs. Total Dissolved Mineral Salts

TDS is a measure of all the dissolved solids in the water, including dissolved minerals.

Minerals are inorganic substances found in the earth's crust. When dissolved in water, they take the form of mineral salts. But other substances could also be dissolved in the water, including bromate (an inorganic substance that is not a mineral) and other dissolved molecules such as silica and bicarbonate.

Actually, compared with minerals, these other substances occur only in minute quantities in water, so the two measures—TDS and Total Dissolved Mineral Salts—would be almost the same. But TDS is scientifically the more accurate term.

TDS does not include dissolved gases, such as oxygen and carbon dioxide, and any undissolved solids that would settle to the bottom of the container.

The problem is that Canada is one of the few countries that use the measure Total Dissolved Mineral Salts. Most other countries use the measure Total Dissolved Solids (TDS). TDS is also used in the Codex Standard and in American regulations. As well, the international system (SI) of measurement uses the unit milligrams per litre (mg/L), not ppm, as in Canada. The unit mg/L, the metric equivalent of ppm, is also used in the Codex Standard.

Our Proposal

The Government proposes that the measure Total Dissolved Mineral Salts be replaced in the Regulations with the measure Total Dissolved Solids, or TDS. TDS would be expressed in milligrams per litre (mg/L), rounded to the nearest mg/L.

What Are the Implications of This Approach? What Are the Benefits?

Making this change would bring Canada in line with international standards.

Consumers would not be affected much because the numerical values of TDS and ppm work out to the same number (500 ppm = 500 mg/L).

Questions

Q31. Do you agree that Canada should adopt the measure Total Dissolved Solids (TDS) expressed in mg/L? If you do not agree, please state your reasons.

5.4 Declaring the Total Dissolved Solids

Under the current Regulations, bottlers of SPRING WATER and MINERAL WATER are required to declare, on the principal display panel of the product label, the TDS content of the water. WATER OTHER THAN MINERAL WATER OR SPRING WATER is exempt from this requirement. It has been suggested that this declaration should be required on all bottled water products.

The Codex Standard does not require that a product's TDS content be disclosed on its label. Countries are allowed to decide for themselves if they will require this measure. Nor is it a requirement in the U.S. However, Canadians are used to seeing this information on bottles of SPRING WATER and MINERAL WATER.

The Government is considering a couple of options for dealing with this issue and seeks your recommendation.

Our Proposal

Option A: Make TDS disclosure mandatory for WATER REPRESENTED BY ITS ORIGIN, optional for PREPARED WATER

Under this option, disclosure of the water's TDS content would be mandatory in the case of products that qualify as WATER REPRESENTED BY ITS ORIGIN. This information would have to appear in a statement on the principal display panel of the label. TDS disclosure would continue to be voluntary in the case of PREPARED WATER.

Option B: Make TDS disclosure mandatory for all bottled water

Under this option, disclosure of the product's TDS content would be mandatory for all bottled water.

What Are the Implications of This Approach? What Are the Benefits?

Option A represents the status quo: there would be no change. Option B might be preferred by buyers who either prefer or want to avoid the taste of bottled water with a high TDS content.

Questions

Q32. Which of these two options do you prefer? Why?

Q33. If neither option appeals to you, can you suggest an alternative?

5.5 Listing Mineral Ions and their Concentrations

Under the current federal Regulations, Canadian manufacturers of bottled water are not obliged to list on their product labels the individual mineral ions present in the water.

But there is one exception. The Regulations specify that the labels of **all** bottled water and packaged ice sold in Canada must include a statement of the water's total fluoride ion content, expressed in parts per million. This information must appear on the principal display panel of the label and is not optional. (See section 5.8 for a fuller discussion of this issue.)

But although bottlers don't have to list the mineral ions in their water (with the above-

noted exception), they may choose to do so anyway.[2] The Government does not object to this practice provided that:

- bottlers don't claim any nutritional benefits for the listed minerals, and
- no items on the list are allowed to stand out (bottlers can't print the entry for calcium in bold letters, for example).

This information, if provided, can appear anywhere on the label.

Our Proposal

The Government proposes to revise the Regulations to give Canadian bottlers the option of listing the mineral ions present in their bottled water products, together with their concentrations. Bottlers who choose to exercise this option would have to abide by all of the following conditions:

1. all the constituent mineral ions must be listed together;
2. all items in the list must be given equal prominence (that is, none can be allowed to stand out);
3. no nutritional benefits can be claimed for any of the minerals; and
4. the concentrations must be expressed in mg/L, rounded to the nearest mg.

Bottlers could identify a mineral ion by its chemical name, its chemical symbol, or both. Here is a list of some of the mineral ions commonly found in bottled water:

bicarbonate	(HCO_3)
calcium	(Ca)
chloride	(Cl)
magnesium	(Mg)
potassium	(K)
silica	(SiO_2)
sodium	(Na)
sulfate	(SO_4)

These ions, and any others present in the water, could be listed on the product label in any order.

What Are the Implications of This Approach? What Are the Benefits?

Under this proposal, instead of being silent on the issue, the Regulations would give bottlers specific permission to list the types and quantities of mineral ions in their products, if they wanted to, provided they met the four conditions listed above. Imposing these conditions would ensure fairness and consistency. Bottlers who chose

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[2] Quebec bottlers are required to list the mineral ions on the labels of water bottled in that province. European bottlers also tend to provide this information.

to list the mineral ions in their products would be providing consumers with additional information they could use to make buying decisions.

Questions

Q34. Do you agree that the declaration of individual mineral ions in bottled water products should continue to be voluntary? For what reasons?

Q35. Do you think it's a good idea that bottlers who choose to list the mineral ions in their product should be required to observe the four conditions listed above? Should any of these conditions be deleted? Should any others be added?

5.6 What Method Should Be Used to Measure TDS?

The current Regulations do not specify which method should be used to measure TDS in SPRING WATER and MINERAL WATER. The Canadian Food Inspection Agency uses Method 920.193 of the Association of Official Analytical Chemists. This method is similar to that used in the Codex Standard. The main difference is that the Codex Standard calls for water in the sample to be evaporated at 180°C instead of 100°C, to provide sufficient energy to remove moisture from certain hydroscopic mineral salts. The same evaporation temperature is used in the method employed in Quebec.

Because different methods of measuring TDS yield different values, it is important that the method used be standardized across Canada, so that consumers can accurately compare different bottled water products.

Our Proposal

The Government proposes to amend the Regulations to specify that, for determining TDS content of WATER REPRESENTED BY ITS ORIGIN and, where applicable, PREPARED WATER, the method shall be the one published in *Standard Methods for the Examination of Water and Waste Water*.[3]

What Are the Implications of This Approach? What Are the Benefits?

This change will standardize the method for measuring TDS values for bottled water across Canada.

Question

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[3] Published by the American Public Health Association, the American Water Works Association, and the Water Environment Federation, a trade association focused upon preserving and enhancing the global water environment (see http://www.wef.org/).

Q36. Do you agree with the Government's proposal? Please explain your answer.

5.7 Declaring the Ozone Content

The current Regulations for bottled water require that producers who add ozone to MINERAL WATER or SPRING WATER must include a statement to this effect on the principal display panel of the product label. But rules governing food additives also require that the added ozone be listed as an ingredient. So under the current Regulations, ozone, when added to SPRING WATER or MINERAL WATER, must be listed on the product label twice: in the product's list of ingredients and in a separate statement on the principal display panel.

Waiter, There's Ozone in My Water!

Ozone is pale blue gas that occurs naturally in small amounts in the Earth's stratosphere. The chemical is used commercially as a bleaching agent and as a germicide to sterilize drinking water. Typically, disinfection by ozone, chlorine or ultraviolet radiation constitutes the final step in municipal water treatment.

In the bottling industry, ozone is often added to the water as soon as the water is collected. Its level in the water is kept constant throughout the bottling process to inhibit the growth of microorganisms. Ozone not only kills pathogenic bacteria but is also effective in removing objectionable odours and flavours—and it leaves no chemical residues.

As a powerful oxidizing agent, ozone can transform bromide—a naturally occurring element in water—into bromate, a carcinogen. An interim standard (IMAC) has recently been developed for bromate in the *Guidelines for Canadian Drinking Water Quality*.

Our Proposal

To avoid the duplication of information, the Government proposes to delete from the Regulations the rule that, for WATER REPRESENTED BY ITS ORIGIN, any added ozone must be declared on the principal display panel of the product label. Ozone, when added to **any** bottled water, would still have to be included in the list of ingredients, whether the list appears on the principal display panel or elsewhere on the label.

What Are the Implications of This Approach? What Are the Benefits?

This change would end the duplication of information about ozone on the labels of WATER REPRESENTED BY ITS ORIGIN.

Question

Q37. Do you agree with the Government's proposal? Please state your reasons.

5.8 Declaring the Fluoride Content

Fluoride, a mineral nutrient, is often added to bottled water to help prevent dental cavities. The current Regulations permit the addition of fluoride to SPRING WATER and MINERAL WATER provided that:

- the total of added plus naturally occurring fluoride in the water does not exceed 1 part per million (ppm);
- bottlers advise consumers, in a statement printed on the principal display panel of the product label, that they have added fluoride to their product.

Furthermore, for all bottled water and packaged ice, bottlers must state on the principal display panel of the product label the **total fluoride ion content** (whether it's naturally occurring fluoride, or added fluoride, or both), expressed in ppm.

But rules governing packaged food in general require that any **added** fluoride be listed as an ingredient. To comply with both rules, fluoride, when added to SPRING WATER or MINERAL WATER, must be listed twice: in the product's list of ingredients and in a statement on the principal display panel. Not only does this requirement generate redundant information, it is contrary to the general rule that manufacturers need not disclose the addition of vitamins or minerals to foods on the principal display panel of a food label.

Although moderate amounts of fluoride can be helpful, too much of it can be harmful to health, so it's important that consumers know how much fluoride they are exposed to through bottled water. But knowing the fluoride ion content of packaged ice is another matter. People generally consume ice in small quantities—in the form of two ice cubes added to a beverage, for example. In many cases the ice is not consumed at all: it is used to cool other food. For these reasons, stating the total fluoride content of packaged ice may not be particularly useful.

Our Proposal

The Government proposes to make the following changes to the Food and Drug Regulations:

1. Eliminate the requirement that the addition of fluoride or the total fluoride ion content be declared on the principal display panel of the label of WATER REPRESENTED BY ITS ORIGIN.

2. For packaged ice, eliminate the mandatory requirement that the total fluoride ion content be indicated.

3. Keep the requirement that **all** bottled water products must indicate the total concentration of fluoride ions (naturally occurring plus added) in the water rounded to the nearest 0.1 mg. But this information would no longer have to appear on the principal display panel: it could be located anywhere on the label.

What Are the Implications of This Approach? What Are the Benefits?

The three proposed changes listed above would not be enacted individually, but together. Combined, these changes would eliminate redundant information in the case of WATER REPRESENTED BY ITS ORIGIN, and remove unnecessary information in the case of packaged ice.

Fluoride, when **added** to bottled water or packaged ice, would still have to be listed as an ingredient. And the total fluoride ion content of **all** categories of bottled water would still have to be stated on the product label, although not necessarily on its principal display panel. The 1 ppm limit on added fluoride would still apply in all cases.

Questions

Q38. Do you agree or disagree with item #1 of the proposal? Please explain your answer.

Q39. Do you agree or disagree with item #2 of the proposal? Please explain your answer.

Q40. Do you agree or disagree with item #3 of the proposal? Please explain your answer?

5.9 Identifying the Location of the Source

Under the current Regulations, producers of SPRING WATER and MINERAL WATER must include, on the principal display panel of the product's label, a statement that identifies "the geographical location of the underground source from which [the water] is obtained."[4]

In the case of WATER OTHER THAN MINERAL WATER OR SPRING WATER, bottlers are generally not allowed to claim that the water comes from a specific source. Why? Because in most cases such water has been extensively treated, to the point that it may no longer resemble the water at the source; or because the final product could contain water from several different sources. An exception is made in the case of WATER OTHER THAN MINERAL WATER OR SPRING WATER that is treated only in the ways permitted for MINERAL WATER or SPRING WATER—that is, in accordance with section 1.2 (a - l). In such cases, bottlers are permitted to state the location of the source, if they want to.

How specific does a location identifier need to be? The current Regulations don't say, so bottler's statements have ranged from the specific ("Bridgewater, Nova Scotia") to the general ("The Canadian Rockies"). The newly adopted Codex Standard recommends a "precise geographic location" but leaves countries to decide for themselves how much detail should be given.

The Government would like to amend the Regulations to give bottlers precise directions about the information to be included in a location identifier.

Our Proposal

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[4] Food and Drug Regulations, Division 12, Section B.12.002(a).

The Government proposes that, for WATER REPRESENTED BY ITS ORIGIN, bottlers should continue to identify the geographical location of the water's source. This requirement would be mandatory for WATER REPRESENTED BY ITS ORIGIN, optional for PREPARED WATER that is treated only in accordance with section 1.2 (a - l).

Under this proposal, in the case of imported water, the location identifier would include at least the names of the region and country. For Canadian-produced water, the location identifier would include at least the names of the local government unit[5] and the province/territory.

For WATER REPRESENTED BY ITS ORIGIN, the location identifier must be located on the principal display panel of the label accompanied by "source". It is also acceptable for the location identifier to mention a local geological formation or water resource (for example, "Blackcomb Mountain, Whistler, B.C."; or "Guelph-Amabel Aquifer, London, Ontario").

Questions

Q41. Do you agree that manufacturers of any bottled water product that qualifies as a WATER REPRESENTED BY ITS ORIGIN should be required to identify the source of the water on the product label? Please state your reasons.

Q42. Do you agree that, in general, a statement about the source of the water or its location should not be allowed in the case of PREPARED WATER, unless the water has been treated only in accordance with section 1.2?

Q43. In your opinion, is the degree of precision for the location identifier that would be required under this proposal appropriate? Please explain your answer.

5.10 Identifying Water Obtained from a Municipal Water System

Currently, manufacturers who draw their water from a public or municipal water distribution system do not have to reveal this fact on their product's label. In the absence of this information, consumers could be buying locally available tap water without knowing it.

Our Proposal

The Government proposes to include in the Regulations a requirement that water drawn from a public or municipal water distribution system must include the statement "From a public/municipal water distribution system" on the product label.

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[5] "Local government unit" means a city, metropolitan government area, town, village, municipality or other area of local government.

This regulation would apply to all bottled water unless it has undergone significant change, as a result of treatments or additions, so that it no longer resembles the water in the source. But what does "significant change" mean? The Government is considering three possible answers to this question, and is seeking your recommendations.

Option A: "Significant change" means the addition of CO_2 or fluoride, or a change of at least 20% in TDS

Under this option bottlers would not have to identify their water as coming from a public water distribution system if:

1. they added fluoride to the water; or
2. they added carbon dioxide (CO_2); or
3. they treated the water in some way that resulted in at least a 20% change in the water's TDS value relative to its value in the source.

The 20% cut-off is based on the accuracy of current methods used to measure TDS in water. This definition of "significant change" is used in the Codex Standard.

Option B: "Significant change" means the addition of CO_2 or fluoride, or a change of at least 20% in TDS, or the removal of disinfectants and their by-products

Option B is like Option A but adds a fourth item to the list of "significant changes": the removal of any disinfectant (such as chlorine) and its by-products. Bottlers who obtained their water from a public water distribution system but treated it in any of these four ways would not have to declare that they were using tap water.

Option C: "Significant change" means that the TDS has been reduced to the level of demineralized water: 10 mg/L or less

Under Option C, regardless of how bottlers treated tap water, they would still have to declare that it came from a public water distribution system unless they reduced its TDS rating to a very low level, equivalent to that of demineralized water.

This option is similar to the American approach. In the U.S., bottlers must state on the product label that the water comes "from a community water system" or "from a municipal source," unless it qualifies as purified water, demineralized water or sterilized water according to established definitions of these terms. In all three of these products the TDS count is very low, or zero.

Questions

Q44. Do you agree or disagree with the principle that bottlers who obtain their water from a public water distribution system **but alter it in a significant way** should

be exempt from declaring the water's source? Whether you agree or disagree, please state your reasons.

Q45. If you agree with the principle stated in the preceding question, which of the three above-listed options (A, B, or C) should be the basis for exemption? Please state your reasons.

Q46. In your opinion, is the statement "From a public/municipal water distribution system" a suitable declaration of the water's source? If you think it isn't, what wording would you suggest?

5.11 What if Carbon Dioxide is Added?

Under the current Regulations, if carbon dioxide (CO_2) is added in any amount to the water, whether SPRING/MINERAL WATER or WATER OTHER THAN MINERAL WATER OR SPRING WATER, the word CARBONATED must appear in the product's common name. So, the common name for SPRING/MINERAL WATER with CO_2 added is CARBONATED SPRING WATER or CARBONATED MINERAL WATER. The common name for WATER OTHER THAN MINERAL WATER OR SPRING WATER with CO_2 added is CARBONATED WATER (see section 5.2).

Also, in the case of SPRING/MINERAL WATER to which CO_2 has been added, if the CO_2 comes from the same underground source as the water, bottlers are permitted to use the terms SPARKLING or NATURALLY CARBONATED. Nothing in the Regulations either allows or disallows the use of these terms, but the Government permits it in this special case as a matter of policy. If used, the terms can be added to the product's common name (eg., SPARKLING SPRING WATER, NATURALLY CARBONATED MINERAL WATER) or used on their own elsewhere on the label. No distinction is made concerning the amount of CO_2 added.

Carbon Dioxide in Water

Carbon dioxide (CO_2) is often added to bottled water to make it bubbly (effervescent) or to remove excess minerals from the water. Adding CO_2 shifts the pH equilibrium of the water, making it more acidic. This changes the water's capacity to hold dissolved substances, including minerals, in solution. As the pH changes, some minerals that were dissolved might solidify and settle to the bottom of the container.

Naturally occurring CO_2 exists only in water from underground sources, but not all underground water contains CO_2. When it does, the CO_2 is dissolved in the water and held there under pressure. When the water is brought to the surface, the CO_2 dissipates. Bottlers can draw off the CO_2 content of SPRING WATER or MINERAL WATER as they collect it, and re-inject the gas back into the water later during the bottling process.

The recently adopted Codex Standard is more discriminating about the types and amounts of CO_2 that are added to bottled water. The Government proposes to amend the Regulations to better reflect the variety of carbonated waters on the market and to bring the Regulations into line with the Codex Standard.

Our Proposal

The changes proposed by the Government would require (or permit) the following:

1. If CO_2 has been added to a bottled water product so that it spontaneously and visibly releases CO_2, in any amount, when uncapped under normal atmospheric conditions, the terms CARBONATED or SPARKLING would have to be added to the product's common name. This requirement would be mandatory and would apply to **all** bottled water.

2. In the case of SPRING WATER and MINERAL WATER, if the added CO_2 comes from the same source as the water and is re-injected back into the water to the same level as it was present there originally, then the term NATURALLY could be added to the product's common name (ie., NATURALLY CARBONATED SPRING WATER or NATURALLY SPARKLING MINERAL WATER). This measure would be optional.

3. In the case of SPRING WATER and MINERAL WATER, if CO_2 from the source is added to the bottled water so that it's concentration is at least 20% greater in the final product than in the source, the product may be described as FORTIFIED WITH CARBON DIOXIDE. This measure, too, would be optional.

Note that these three measures constitute a single proposal.

What Are the Implications of This Approach? What Are the Benefits?

Under this proposal, the use of the terms CARBONATED, NATURALLY CARBONATED and SPARKLING would change slightly. Currently, any water that has CO_2 added must include the word CARBONATED in its common name. With the proposed change, the product would have to add to its common name either the word CARBONATED or SPARKLING.

The modifier NATURALLY would be reserved for the special case where CO_2 from the source is reintroduced to SPRING WATER or MINERAL WATER to the same level as was present there originally. As before, the use of the modifier would be optional. If used, it would produce names such as NATURALLY CARBONATED SPRING WATER or NATURALLY SPARKLING MINERAL WATER.

Item #3 above refers to the situation where CO_2 from the source is added to a SPRING WATER or MINERAL WATER that already contains some CO_2. If the concentration of the gas in the final product is 20% greater than in the source, the product could be referred to as FORTIFIED WITH CARBON DIOXIDE. The statement, if used, could appear anywhere on the label.

Combined, these three changes would bring Canada's Regulations in line with the Codex Standard.

Question

Q47. Do you agree with the Government's proposal? Please explain your answer.

5.12 Declaring What Treatments Were Used

Section 5.2 asks whether consumers want to know, through the product's common name, about the results of any treatments the water may have undergone. This section asks if consumers want to know about the actual treatments themselves.

Under the current Regulations, the names of any treatments applied to WATER OTHER THAN MINERAL WATER OR SPRING WATER must be listed on the principal display panel of the product label, with the exception of:

- the addition of ingredients,
- decantation,
- filtration, or
- chlorination, when it includes the removal of all chlorination by-products.

The declaration of treatments is not required in the case of SPRING WATER and MINERAL WATER because the only treatments they may undergo do not result in any significant changes to the water (see section 1.2). As discussed in sections 5.7 and 5.8, if ozone or fluoride are added, the fact must be documented on the principal display panel of the product label. If CO_2 is added, the word carbonated must be included in the product's common name (see section 5.11).

Some people feel that the use of any treatment that changes the water to the extent that it cannot be traced back to its source should be declared on the product label. These people argue that consumers have a right to know about the use of any treatment that causes a significant change to the water. If this practice were adopted, then the use of any of the following treatments, among others, would have to be declared:

1. distillation
2. reverse osmosis
3. deionization
4. nanofiltration
5. ultrafiltration
6. granular activated alumina filtration
7. water softening
8. coagulation
9. mineralization
10. complexation.

But would these terms be meaningful to consumers? Rather than listing the treatments used, would it make more sense to describe the results of treatment with terms such as carbonated, ozonated, ionized, filtered, demineralized, disinfected etc.? The identification of treatments used in food processing is generally not required in Canada. In the U.S., the identification of treatments used on bottled water is optional. The

Codex Standard does not require that treatments applied to a "prepared water" be indicated on the product's label: it leaves countries to establish their own rules.

With the proposed changeover to the categories WATER REPRESENTED BY ITS ORIGIN and PREPARED WATER (as discussed in section 1.1), the Government would also like to amend the Regulations to better reflect consumer's desire for information about the methods used to treat bottled water. The Government is considering the following two options and seeks your recommendation.

Option A: Make the declaration of treatments optional

Under this option, the declaration of treatments used would be voluntary and would apply to **all** bottled water. If declared, the treatment's name could be worked into the product's common name (as in the name REVERSE OSMOSIS DEMINERALIZED WATER, for example), or it could appear separately elsewhere on the label (for example, the product might be called simply DRINKING WATER and the fact that it was deionized would be made in a separate statement).

Under Option A any permitted additions, such as mineral salts, ozone, fluoride, CO_2, and so on, would have to be declared in the list of ingredients.

What Are the Implications of This Approach? What Are the Benefits?

This approach would be the simplest. It would avoid crowding the label with terms that are unfamiliar to most buyers. On the downside, for some products, consumers would not know what treatments had been used.

Option B: Make the declaration of treatments mandatory

Under Option B the declaration of treatments would be mandatory for **all** bottled water products—with some exceptions. The rule would not apply to treatments that result in changes that would occur anyway when the water is exposed to normal atmospheric conditions. Put another way, the exception would apply to the treatments listed in section 1.2, items (a) through (f) inclusive. Chlorination followed by removal of by-products would continue to be exempt under this option.

Under Option B any permitted additions, such as mineral salts, ozone, fluoride, CO_2, food additives and so on, would have to be declared in the list of ingredients.

What Are the Implications of This Approach? What Are the Benefits?

With Option B, consumers would know about any treatments that caused significant change in the water's chemical composition or other characteristics. It would enable buyers who prefer water treated with reverse osmosis, for example, to zero in on these

products. However, with Option B, some consumers could be overwhelmed with information that leaves them more confused than ever.

Questions

Q48. In your opinion, should the declaration of treatments used on bottled water be mandatory or voluntary? If mandatory, should the declaration appear on the principal display panel? Please explain your answer.

Q49. In your opinion, is the 10-point list of treatments that would have to be declared under Option B complete? Should any items be removed from the list? Should any be added? Please justify your answer.

6. Other Labelling Issues

This chapter deals with miscellaneous issues covered in the Guide to Food Labelling and Advertising that the Government feels need to be updated or clarified. Most of the proposals discussed here would not result in changes to the Regulations, but may be reflected in new or revised government policies.

The fundamental rule regarding the labelling of any food is expressed in Section 5(1) of Part I of the Food and Drugs Act. Section 5(1) prohibits the labelling, packaging, treating, processing, selling or advertising of any food in a manner that misleads or deceives consumers as to the character, value, quantity, composition, merit or safety of the product.

Clearly, Section 5(1) covers a lot of ground. Some of the implications of Section 5(1) are dealt with in detail in other regulations. But some issues are too fluid or complex to be reduced to cut-and-dried regulations.

To help industry and regulators understand the Government's policy and comply with Section 5(1) of the Act, the Canadian Food Inspection Agency publishes the *Guide to Food Labelling and Advertising*. The *Guide* sets out guidelines for the labelling and advertising of food, including bottled water. Labels that comply with the *Guide* are considered to be in compliance with Section 5(1) of the Food and Drugs Act and Regulations and other relevant legislation.[1]

6.1 When Can the Term NATURAL Be Used?

NATURE and NATURAL are terms often misused on labels and in advertisements for food. Section 4.2.8 of the *Guide* sets out the conditions under which NATURAL may be applied to a food. Basically, a food can be called NATURAL only if:

1. it does not contain, and has never contained, an added vitamin, mineral nutrient or food additive; and
2. it has not been treated in any way that significantly changes its original physical, chemical or biological state.

Our Proposal

The Government's position is that the rules governing the use of the term NATURAL on

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[1] The *Guide to Food Labelling and Advertising* should not be confused with the *Guidelines for Canadian Drinking Water Quality* or the Health Canada guidelines referred to in Chapter 3. The *Guide to Food Labelling and Advertising* is available on-line at http://www.inspection.gc.ca/english/bureau/labeti/guide/guidee.shtml.

the labels of bottled water should continue to be those of section 4.2.8 of the *Guide to Food Labelling and Advertising*, as has been the case for many years. This proposal does not establish a new policy; it simply clarifies an existing one.

In particular, since bottled water is a food, NATURAL should not be applied to any bottled water product that does not meet the above two conditions, whether the term is used as part of the product's common name or as part of a general statement about the product.

To decide if a particular treatment is acceptable on a product to be labelled NATURAL, manufacturers need only consider whether the treatment changes the original composition of the water beyond what would occur anyway when the water is exposed to normal atmospheric conditions. According to this criterion, the following treatments would be acceptable:

(a) the removal of undissolved solids through pressure change, filtration, centrifugation or decantation;
(b) aeration with a gas that normally occurs in the atmosphere, provided that the concentration of the gas in the final product did not exceed its solubility under normal atmospheric conditions;
(c) disinfection by microfiltration, pasteurisation or ultraviolet irradiation, or by any other means that does not modify the water's original chemical composition;
(d) re-injection of carbon dioxide, recovered from the source water, to a concentration in the final product equal to that of the source.

In keeping with current policy, NATURAL could be used as part of the product's common name provided that the name clearly indicates to consumers that the product contains NATURAL water to which carbon dioxide, ozone or fluoride have been added. This provision would allow manufacturers to use common names such as OZONATED NATURAL SPRING WATER, CARBONATED NATURAL MINERAL WATER WITH OZONE ADDED, NATURAL SPRING WATER WITH FLUORIDE ADDED, or CARBONATED NATURAL SPRING WATER for qualifying products.

The Government also feels that the chosen common name of a qualifying product should reflect the order in which any additives or treatments had been applied. For example, the common name OZONATED NATURAL SPRING WATER would be acceptable, whereas the name NATURAL OZONATED SPRING WATER would not. Why? Because the former name indicates that the product started off as a natural SPRING WATER to which ozone was subsequently added, whereas the latter name suggests that ozonated water is natural.

What Are the Implications of This Approach? What Are the Benefits?

Under the above criteria, PREPARED WATER and WATER REPRESENTED BY ITS ORIGIN with added ozone, carbon dioxide or fluoride would not qualify as NATURAL water. However,

a WATER REPRESENTED BY ITS ORIGIN could include the term NATURAL in its common name if the name also clearly indicated that ozone, CO_2 or fluoride have been added.

Some producers have argued that water treated with ozone remains essentially unchanged, and should therefore qualify as a NATURAL water.[2] But research has shown that ozone can react with oxidizable organic matter, minerals and bacteria in the water to form bromate, aldehydes, ketones and carboxylic acids, among other things. Evidence exists that some of these by-products—bromate, for example—could be harmful to human health. Calling a bottled water product that may well contain harmful by-products of treatment NATURAL would be inappropriate and potentially misleading.

Questions

Q50. Do you agree with the Government's position that producers should continue to observe the current guidelines for the use of the word NATURAL on labels of bottled water? Please explain your answer.

Q51. In your opinion, should the treatments listed above in items (a) through (d) be permitted on a water labelled as NATURAL? Please explain your answer.

Q52. Should any other treatments be added to the list? Please explain your answer.

6.2 When Can the Term PURE Be Used?

PURE is another term that is often misused in connection with food, including bottled water. The conditions under which PURE can be used in connection with any food are set out in section 4.2 of the *Guide to Food Labelling and Advertising*.

Basically, PURE should only be used in reference to foods composed of a single ingredient. For example, a PURE vegetable oil would contain nothing but vegetable oil, not even any additives.

Note that PURE when used to describe water does not mean that the water is free of all bacteria and other microorganisms, as some people think. Only sterilized water would be totally free of bacteria.

Regulations in the U.S. do not prohibit the use of the term PURE in connection with water, but its use is discouraged because its meaning is thought to be ambiguous and potentially misleading.

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[2] Ozone, a highly unstable molecule, rapidly breaks down and dissipates into water as oxygen.

Our Proposal

The Government's position is that the rules governing the use of the term PURE on the labels of bottled water should continue to be those of section 4.2 of the *Guide to Food Labelling and Advertising*. This proposal does not establish a new policy; it simply clarifies an existing one.

In keeping with this policy, PURE could be used as part of the common name of a bottled water provided that any added substances were also mentioned in the name. So, for example, a name such as PURE SPRING WATER WITH ADDED FLUORIDE would be acceptable because it clearly states that the product is 100% water with only fluoride added.

What Are the Implications of This Approach? What Are the Benefits?

The policy should be interpreted to mean that PURE can be used only in connection with a bottled water product to which nothing has been added. This principle applies to any water, whether treated or untreated; the only proviso is that nothing has been added that is not indicated in the product's common name.

Notice that PURE water is not the same as WATER REPRESENTED BY ITS ORIGIN, because the latter could contain added ozone, fluoride or CO_2. Nor is PURE water the same as NATURAL water. For example, a water could be treated to remove dissolved and undissolved minerals and still be called PURE water, because nothing has been added to it. But it could not be called NATURAL water because its chemical composition has been changed.

Questions

Q53. Do you agree that the Government's existing policy regarding the use of the term PURE in connection with bottled water be continued? Please explain your answer.

6.3 When Can the Term PURIFIED Be Used?

A recent Health Canada poll shows that Canadians have diverse opinions about what PURIFIED means when used in reference to bottled water. Some believe it means water that is free of bacteria and parasites; others feel it means water from which undissolved substances have been removed, or water that has been sterilized, or water from which dissolved mineral salts have been removed. A third of respondents to the poll thought PURIFIED water means water from which everything has been removed—bacteria, undissolved substances and dissolved minerals.

Given all this uncertainty, it may be just as well that use of the term PURIFIED is not permitted on labels of water bottled in Canada. The Food and Drug Regulations

instruct Canadian bottlers to use DISTILLED when referring to water that has been vaporized and condensed, or DEMINERALIZED in reference to water whose mineral content has been reduced to a TDS level below 10 mg/L.

In the U.S., DEMINERALIZED WATER and PURIFIED WATER are used interchangeably. A few Canadian bottlers have expressed a desire to use this terminology.

To resolve the issue, the Government is considering the following two policy options and seeks your recommendation.

Option A: PURIFIED can't be used at all

Under this option, Canadian bottlers would not be allowed to use PURIFIED on their labels—not as part of the product's common name, nor in any claim about the product (as in the statement "This product contains purified water").

In effect, this option would keep matters as they are. Why choose this option? Perhaps because it's the simplest way to avoid confusion, given that there is no agreement about what PURIFIED means.

Option B: PURIFIED can be used only if it refers to a reduction of minerals

Under this option, PURIFIED could not be used either in a common name or in a separate statement about the product. But the term could be used on the label of a demineralized water as part of a statement describing how the water has been treated to remove mineral ions. Such a statement, when used, would have to be linked to a declaration of the water's TDS content.

For example, bottlers could include on the label a statement such as "Purified by reverse osmosis to reduce TDS to less than 10 mg/L." Or they could claim the water was "Purified* by reverse osmosis," and then print the water's TDS value elsewhere on the label, thus: "*TDS: less than 10 mg/L." The Government feels that this use of the term would be acceptable because included in the statement is a definition of what the term means.

Questions

Q54. In your opinion, what is PURIFIED water?

Q55. Do you think the Government should adopt option A or B? Please explain your answer.

6.4 Misrepresentations

Section 5(1) of the Food and Drugs Act prohibits the use of any kind of representation

on a food label or advertisement that is untrue or that might mislead consumers. Readers should understand that whereas the health, safety, composition and labelling standards in Division 12 of the Food and Drug Regulations apply only to water and ice packaged in sealed containers, the provisions of Section 5(1) of the Act apply to **all** water and ice, including water sold to consumers who provide their own bottles.

6.5 Trade Names, Brand Names and Trademarks

This section does not propose a new policy; it simply clarifies an existing one.

Under the recently adopted Codex Standard for bottled water, a product's trade name or brand name may not refer to a specific geographical location unless the product is a natural MINERAL WATER that has been collected at that location. The Codex Standard also prohibits the use of any statement or pictorial device on a label that may confuse or mislead consumers about the nature, origin, composition or properties of a bottled water product.

The Government's policy is to follow the Codex Standard as much as possible in this regard. Manufacturers who register a word, name, symbol or phrase under the Trademarks Act must still make sure that the use of the registered material complies fully with all relevant federal laws. For example, care must be taken to ensure that the trade name, brand name or other copyrighted material does not misrepresent a product's classification, composition or origin. Any such misrepresentation would be a violation of the Food and Drugs Act.

Question

Q56. Do you agree with the Government's policy regarding trade names, brand names and trademarks? Please explain your answer.

6.6 Vignettes

Consumers can be misled not only by the words used on the labels of bottled water products, but by the vignettes (pictures) as well. For example, if a label depicts a mountain but the water actually comes from the prairies, this would be a misrepresentation of the product and would constitute a violation of Section 5(1) of Part I of the Food and Drugs Act. Section 8.6 of the *Guide to Food Labelling and Advertising* cautions manufacturers against this kind of misrepresentation.

To further clarify when the depiction of a geographical location or feature might be permitted on the label of a bottled water product, the Government is considering the following two policy options, and seeks your recommendation.

Option A: The depiction is permitted if the depicted feature is near the source

If this option is selected, the Government's policy would be that a label could depict a geographical feature such as a mountain or waterfall provided that:

- the feature can be seen from the collection point, and
- the collection point and the depicted geographical feature lie within the boundaries of the same local government unit, or within the boundaries of two separate local government units that are adjacent to one another.

If either condition is not met, the label would have to bear a disclaimer such as "Picture does not reflect the actual source." The disclaimer would have to be printed on the picture itself or immediately beside it.

Note that these conditions would apply equally to WATER REPRESENTED BY ITS ORIGIN and PREPARED WATER.

For example, the labels of any PREPARED WATER or SPRING WATER obtained from either Canmore or Calgary, Alberta, could legitimately bear a picture of the Rocky Mountains, which can be seen from either location. But the labels of water obtained from Calgary would have to include the disclaimer "Picture does not reflect the actual source" because Calgary does not lie within the boundaries of a local government unit that is adjacent to the Rockies.

The Canadian Food Inspection Agency could ask any company that did not comply with this policy to change its labels.

Option B: The depiction is permitted if the water has not been extensively treated

Under this option, a vignette of a geographical feature would be acceptable only in the case of water subjected to limited treatments. Acceptable treatments would be those that result only in such changes to the water as would occur anyway under normal atmospheric conditions (see the sidebar in section 1.2 for an explanation of this term). In short, the acceptable treatments would be those listed in section 1.2, points (a) through (g) inclusive.

What Are the Implications of This Approach? What Are the Benefits?

The premise behind Options A and B is that a picture of a geographical location or feature on the label of a bottle of water represents some sort of claim about the product. But what is being claimed? The choice between Options A and B depends on one's answer to this question.

For example, if you think the picture represents a claim that the water comes from the depicted location, and that's all that's claimed, then Option A would be the logical choice. With Option A, consumers would know that the water in the bottle came from a source located somewhere near the depicted feature.

On the other hand, if you think the picture represents a claim that the water comes from the depicted location **and** is essentially identical to water that might be obtained there, then Option B is the logical choice. With Option B, consumers would know not only that the water in the bottle came from a source located somewhere near the depicted feature, but that it is essentially identical to water that might be obtained at that location.

Questions

Q57. In your opinion, if the label of a bottled water product depicts a certain location or geographical feature, but the water in the bottle does not come from anywhere near the depicted feature, does this constitute a misrepresentation of the product or do the consumers know that the picture on the label is likely not a claim about the source of the water? Please explain your answer.

Q58. In your opinion, does a picture of a mountain or lake on the label of a PREPARED WATER imply that the product is a WATER REPRESENTED BY ITS ORIGIN? Please explain your answer.

Q59. In your opinion, which of the above two options—A or B—would serve consumers better? Please explain your choice.

Q60. If neither option appeals to you, can you suggest a better one?

6.7 Refillable Containers

The Food and Drug Regulations require that, for all food products, certain mandatory information must be included on the principal display panel of a product label. The Food and Drug Regulations describe the principal display panel as the part of the label that is visible to shoppers when the product is displayed for sale in its customary way.

But some large refillable containers can be displayed in several ways, on store shelves with the side of the container visible and upright on the floor or on their side in a rack with the seal over the mouth of the container (the closure) readily visible. This has led some producers to wonder whether they are obliged to print the information intended for the principal display panel in two locations: on the label on the container's side and on the closure. The Government wishes to clarify this policy.

Our Proposal

The Government's policy in the case of refillable retail water containers is that the principal display panel may be either the portion of the label on the side of the container **or** the closure over the mouth of the container. Information that is deemed mandatory under the Regulations may be printed **in either location**, provided that all mandatory information appears together in the same place.

What Are the Implications of This Approach? What Are the Benefits?

This clarification gives producers more flexibility in locating mandatory information on containers of bottled water. As well, it may eliminate the need for some producers to keep separate inventories of containers for each kind of water they sell.

Questions

Q61. Do you agree with this clarification of policy? Please explain your answer.

Glossary

aeration A physical water treatment involving the addition of air to water. The process is used to control taste and odour, and to remove dissolved iron.

aerobic bacteria Bacteria that require oxygen to survive and multiply.

aquifer A water-bearing underground layer of rock or sand.

artesian well A well that taps a confined aquifer.

bottled water Water that is packaged for sale in a sealed container. The term used in the Food and Drugs Regulations is "prepackaged water."

carbonation The addition of carbon dioxide to water to make it effervescent (bubbly) or to remove excess minerals.

carbon filtration A method of removing organic compounds and chlorine by-products from water using carbon's natural ability to adsorb these chemicals. The technique is often used to remove objectionable taste and odour from water.

carbonated bottled water Bottled water that contains natural or added carbon dioxide.

centrifugation A method of separating solids from liquids using rotational forces.

chlorination The disinfection of water using chlorine or chlorine compounds.

coagulation Using chemicals (coagulants) to neutralize the electrical charge on fine particles in water, causing them to clump together. When clumped, the solids can be separated from the water by settling, skimming, draining or filtering.

Codex Standard *The CODEX General Standard for Bottled/Packaged Drinking Waters (Other than Natural Mineral Waters)*, adopted by the Codex Alimentarius Commission in July 2001.

coliform A specific class of bacteria found in the intestines of warm-blooded animals. The presence of coliform in water indicates that the water is polluted and may contain disease-causing (pathogenic) microorganisms.

common name The name specified in the Food and Drug Regulations for a specific category of bottled water product; or, if none is specified, it is the name by which that type of product is commonly known to consumers.

complexation A water treatment that involves adding certain chemicals to water to

prevent any iron in it from oxidizing and changing the water's colour.

decantation Drawing off the upper layer of a liquid after the heavier material (either solid or another liquid) has settled.

deionization A method for removing inorganic impurities from water by using the ionic charge present on inorganic substances.

demineralization The removal of dissolved mineral salts from water.

demineralized water In the current Food and Drug Regulations, bottled water whose mineral content has been reduced to a TDS level below 10 mg/L.

disinfection The treatment of water to inactivate, destroy and/or remove bacteria and other microorganisms from it. Chlorine, ultraviolet light and ozone are often used for this purpose.

disinfection by-product A compound formed by the reaction of a disinfectant such as chlorine with organic material in the water.

distillation A thermal process for removing impurities from water. Distillation involves heating the water to the boiling point, so that it changes to steam. The steam or vapour is then collected and cooled, causing it to condense back into a liquid. Distilling removes bacteria, viruses, organic and inorganic chemicals, heavy metals, volatile gases, cysts, and most minerals and trace elements.

filtration The process of removing particulate matter from water by passing it through a porous medium such as sand.

fluoridation A water treatment involving the addition of fluoride to drinking water to help prevent dental cavities.

food additive Any substance listed in Part B, Division 16 of the Food and Drug Regulations. Generally, food additives are substances that, when added to food, can become part of the food or alter its characteristics, with the exception of mineral nutrients and vitamins (which are added to enhance the nutritional value of food), spices, seasonings, flavourings, agricultural chemicals, and substances added to the packaging material.

granular activated alumina filtration A water treatment using activated alumina, which is made by treating aluminum ore so that it becomes porous and highly adsorptive. Activated alumina will remove several contaminants, including fluoride,

arsenic and selenium.

groundwater Water from an underground aquifer that may reach the surface through a spring, deep well or artesian well.

hard water Water high in calcium and magnesium.

inorganic constituents The same as minerals. They may exist as mineral ions in solution in water.

ionization The splitting (dissociation) of molecules into negatively and positively charged ions.

local government unit A city, metropolitan government area, town, village, municipality or other area of local government.

location identifier A statement on the label of a bottled water product that indicates the location of the water's source.

microorganisms A diverse group of simple life forms including protozoans, algae, bacteria, diatoms, plankton, fungi and viruses.

microfiltration A process for filtering water by forcing it through a screen with very small pores (0.1 to 2 microns in diameter).

milligrams per litre (mg/L) A measure of the concentration of a dissolved substance. A concentration of one mg/L means that one milligram of a substance is dissolved in each litre of water. For practical purposes, this unit is equal to parts per million (ppm), which means that one milligram is a million times smaller than one litre.

mineral Any element normally found in the earth's crust.

mineral ion The ionized form of a mineral when in solution. Mineral ions are normally positively charged.

mineralization The microbial conversion of an element from an organic to an inorganic state.

mineral nutrient Any mineral known to be essential to human health.

mineral water Groundwater that rises to the surface through a natural opening in the

earth or rock and contains a relatively high concentration of mineral ions and trace elements.

mineral salt The stable form of a mineral as it exists in solution (eg., salt (sodium chloride)).

nanofiltration Filtration of minute particles from water using a filter with extremely small pores (10^{-3} microns in diameter).

normal atmospheric conditions The prevailing atmospheric conditions in terms of temperature, atmospheric pressure and the chemical composition of the air.

organic molecule Any carbon-based molecule found in living cells.

ozonation Adding ozone to water to disinfect it or to remove objectionable taste or odour.

pasteurization The partial sterilization (disinfection) of a substance, usually a liquid, by heating it to a critical temperature for a specified time.

pH A measure of the acidity or alkalinity of a solution.

potable water Water that is safe to drink, meaning that it is free of harmful microorganisms and other harmful substances.

precipitation A water treatment that causes dissolved substances to separate from solution as a fine suspension of solid particles.

principal display panel The part of a food label that is visible to shoppers when the product is displayed in its customary way on store shelves.

radionuclide Any man-made or natural element that emits radiation.

refillable container A water container that is designed to be reused.

reverse osmosis A process for reducing the mineral content of water by forcing it to flow under pressure through a semi-permeable membrane. The membrane allows the water to pass through, but not the dissolved solids.

spring water Groundwater that may rise to the surface through a natural opening in the earth or rock.

surface water Water from rain and snow that collects in above-ground reservoirs, lakes, rivers, icebergs and glaciers.

sterilized water Water that is free of all microorganisms. Sterilized water is normally produced by boiling or distilling water under specific conditions, and is stored in sterilized, air-tight sealed containers.

TDS See Total Dissolved Solids.

Total Dissolved Solids (TDS) The total weight of all solids (organic and inorganic) dissolved in water, in parts per million (ppm) or milligrams per litre (mg/L) of water.

ultrafiltration A process for filtering water by forcing it through a screen with very small pores. Ultrafiltration falls between reverse osmosis and microfiltration in terms of the size of particles removed, with ultrafiltration removing particles in the 0.002 to 0.1 micron range.

ultraviolet irradiation A water treatment that involves exposing water to intense ultraviolet light to kill bacteria and other microorganisms.

vitamin Any organic substance that is essential to human health, and which the body cannot make for itself, at least not in sufficient quantities. Vitamins are added to foods to increase their nutritional value.

water resource A type of specific water supply—eg., spring, lake, river, glacier, aquifer etc.

water softening The reduction/removal of calcium and magnesium ions, which are the principal cause of "hardness" in water.

water source The geographical location where the water in a bottled water product was obtained.

well water Groundwater that is reached by drilling or boring and is then pumped to the surface.

Where to Find Additional Information

QUESTIONS AND ANSWERS ON BOTTLED WATER:
http://www.hc-sc.gc.ca/food-aliment/mh-dm/mhe-dme/e_faqs_bottle_water_eng.html

FOOD SAFETY FACTS ON BOTTLED WATER:
http://www.inspection.gc.ca/english/corpaffr/foodfacts/bottwate.shtml

CODEX STAN 227-2001"GENERAL STANDARD FOR BOTTLED/PACKAGED DRINKING WATERS (OTHER THAN NATURAL MINERAL WATERS):
ftp://ftp.fao.org/codex/standard/en/CXS_227e.pdf